



OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

TIER 1/TIER 2 AND OPSRP PENSION BENEFITS RHIA/RHIPA RETIREE MEDICAL BENEFITS

December 31, 2012 Actuarial Valuation

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December 13, 2013

Retirement Board
Oregon Public Employees Retirement System

Dear Members of the Board,

As part of our engagement with the Board, we performed an actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Our findings are set forth in this actuarial valuation report. This report reflects the benefit provisions in effect as of December 31, 2012, as further adjusted by the legislative changes made in 2013 discussed within the report.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

This valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated herein in September 2013.



This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

Some of the actuarial computations presented in this report are for purposes of determining the advisory July 2015 to June 2017 contribution rates for System employers. Other actuarial computations presented in this report under GASB Statements No. 25 and 27, 43 and 45 are for purposes of assisting the System and participating employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions as summarized in this report, and of GASB Statements No. 25 and 27, 43 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work is prepared solely for the use and benefit of the Oregon Public Employees Retirement System.

Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. No third party recipient of Milliman's work product should rely upon this report. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,



Matthew R. Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary



Scott D. Preppernau, FSA, EA, MAAA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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Executive Summary

Executive Summary

Milliman has prepared this report for the Oregon Public Employees Retirement System to:

- Present Milliman’s actuarial estimates of the system-wide liabilities and expenses of the Oregon Public Employees Retirement System (PERS), including pension benefits provided through Tier 1/Tier 2 and the Oregon Public Service Retirement Plan (OPSRP), and retiree medical benefits provided through the Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA), as of December 31, 2012, for PERS to incorporate, as PERS deems appropriate, in its financial statements; and
- Provide information on advisory system-wide average employer contribution rates and employer contribution rates for the School District rate pool and the State and Local Government Rate Pool (SLGRP) calculated as of December 31, 2012.

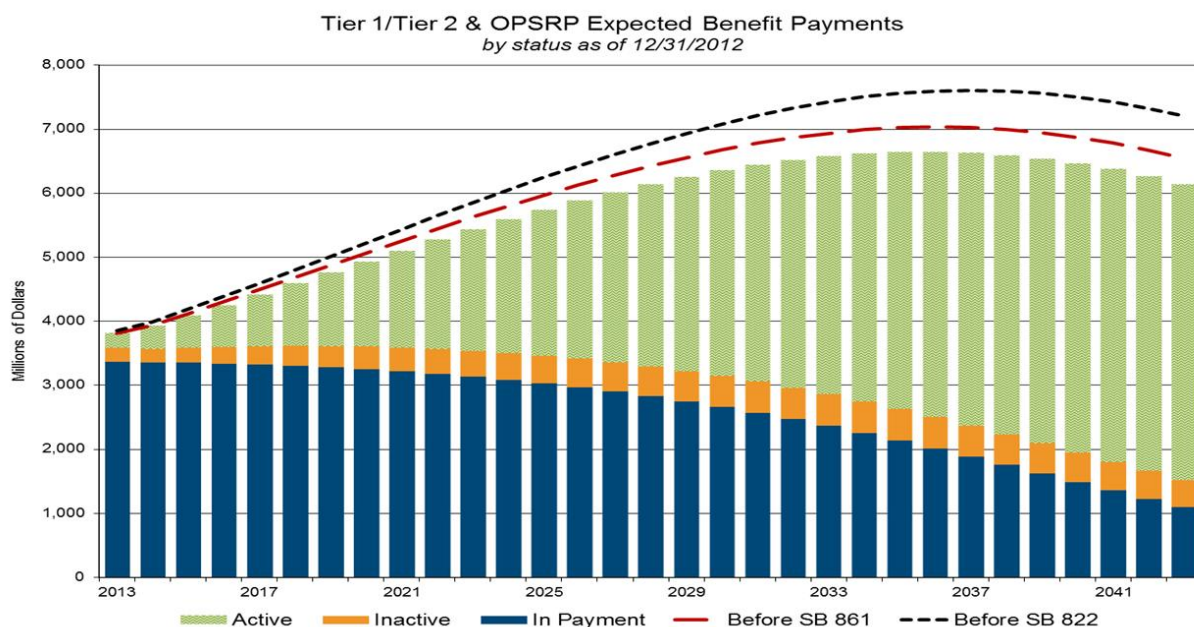
This valuation does not cover the Individual Account Program (IAP). Except where otherwise explicitly noted, contribution rates in this valuation do not include contributions to the IAP. In addition, the valuation does not include an allowance for employer debt service payments on pension obligation bonds.

Legislative and Actuarial Changes

The results shown in this valuation reflect significant changes in both plan provisions and actuarial assumptions and methods since the December 31, 2011 valuation.

The 2013 Oregon Legislature made a series of changes to PERS that lowered projected future benefit payments from the System. These changes, described in detail later in the report, included reductions to future Cost of Living Adjustments (COLA) made through Senate Bills 822 and 861. Senate Bill 822 also required the contribution rates scheduled to be in effect from July 2013 to June 2015, which were originally calculated in the December 31, 2011 valuation, to be reduced.

The graph below illustrates the impact of the 2013 legislation on projected benefit payments from the System.



In addition, in 2013 Milliman worked with the PERS Board to complete a thorough review of actuarial methods and assumptions to be used for the December 31, 2012, and December 31, 2013, valuations. After completion of this review, the PERS Board made several changes, most notably lowering the investment return assumption to 7.75% and changing the actuarial cost method used to allocate benefit costs over a member’s working lifetime.

Due to these changes in both plan provisions and actuarial methods, comparisons shown in this report between current and prior valuation results often show significant differences.

Employer Contribution Rates

Pension Contribution Rates

This report presents system average employer contribution rates calculated as of December 31, 2012. These rates are advisory only. The December 31, 2013 valuation will determine employer contribution rates that will be effective on July 1, 2015. The December 31, 2011 valuation presented the employer contribution rates that are in effect from July 1, 2013 through June 30, 2015, as further modified by Senate Bill 822 passed by the Oregon Legislature in May 2013.

Employer pension contribution rates consist of a normal cost rate and an amortization of the Unfunded Accrued Liability (UAL). Normal cost rates are calculated and charged separately to the Tier 1/Tier 2, OPSRP general service and OPSRP police and fire payrolls. UAL rates are calculated separately for Tier 1/Tier 2 and OPSRP, but each UAL rate is charged across all payrolls. Rates for individual employers are adjusted if the employer maintains a side account or has a pre-SLGRP liability or surplus. The table below compares the average employer contribution rates for each type of payroll calculated for this valuation compared to the rates in effect from July 1, 2013 through June 30, 2015. The estimated system average effect of the Senate Bill 822 reduction in rates for the 2013 – 2015 biennium is also shown in the table.

Pension Contribution Rates (Excludes IAP)						
Payroll	Advisory July 1, 2015			Effective July 1, 2013		
	Tier 1/Tier 2	OPSRP General Service	OPSRP Police & Fire	Tier 1/Tier 2	OPSRP General Service	OPSRP Police & Fire
Normal Cost Rate	13.45%	7.36%	11.46%	9.00%	6.27%	9.00%
Tier 1/Tier 2 UAL Rate ¹	6.73%	6.73%	6.73%	12.47%	12.47%	12.47%
OPSRP UAL Rate	0.60%	0.60%	0.60%	0.15%	0.15%	0.15%
Total Pension Rate	20.78%	14.69%	18.79%	21.62%	18.89%	21.62%
Senate Bill 822 Adjustment	N/A	N/A	N/A	(4.28%)	(4.28%)	(4.28%)
Total Pension Rate (Post-SB 822)	N/A	N/A	N/A	17.34%	14.61%	17.34%
Average Adjustment ²	(6.15%)	(6.15%)	(6.15%)	(5.70%)	(5.70%)	(5.70%)
Net Pension Rate (Post-SB 822)	14.63%	8.54%	12.64%	11.64%	8.91%	11.64%

1. Includes Multnomah Fire District #10

2. Adjustments shown are for side accounts and pre-SLGRP liabilities and are shown on system-wide average basis. For this purpose, adjustments are not assumed to be limited when an individual employer reaches a 0% contribution rate.

Normal cost rates calculated in this valuation increased compared to the contribution rates calculated in the December 31, 2011 valuation, which produced rates effective July 1, 2013. This is primarily due to a change in actuarial cost method and a resulting difference in the allocation of Money Match benefits between past and future service.

Tier 1/Tier 2 UAL rates decreased in this valuation compared to the prior one due to legislative changes to future COLA amounts and investment returns above assumption during 2012. OPSRP UAL rates increased because the change in actuarial cost method worked to increase the actuarial liability assigned to OPSRP.

Pension contribution rates differ for each Tier 1/Tier 2 rate pool. This report calculates the specific rates for each rate pool. Tier 1/Tier 2 rates for independent employers (employers that do not participate in a Tier 1/Tier 2 rate pool) are calculated in separate reports for each employer. Changes in pension contribution rates for each rate pool (or independent employer) are confined to a rate collar depending on funded status. The table below shows the employer pension contribution rates for each Tier 1/Tier 2 rate pool calculated in this valuation compared to the rates in effect as of July 1, 2013 and the average adjustment to that rate for side accounts rate offsets and pre-SLGRP and transition liability charges and credits.

Tier 1/Tier 2 Pension Contribution Rates (Excludes IAP)				
	Advisory July 1, 2015		Effective July 1, 2013	
	SLGRP	School Districts	SLGRP	School Districts
Normal Cost Rate	13.93%	12.28%	9.15%	8.17%
Tier 1/Tier 2 UAL Rate ¹	4.30%	12.26%	10.42%	17.78%
Total Pension Rate	18.23%	24.54%	19.57%	25.95%
Senate Bill 822 Adjustment	N/A	N/A	(4.38%)	(4.40%)
Total Pension Rate (Post-SB 822)	N/A	N/A	15.19%	21.55%
Average Adjustment ²	(5.29%)	(9.33%)	(5.02%)	(8.35%)
Net Pension Rate (Post-SB 822)	12.94%	15.21%	10.17%	13.20%

1. Includes Multnomah Fire District #10

2. Adjustments shown are for side accounts and pre-SLGRP liabilities and are shown on system-wide average basis. For this purpose, adjustments are not assumed to be limited when an individual employer reaches a 0% contribution rate.

The Tier 1/Tier 2 contribution rates shown here are after reflecting the effects of the rate collar. Due to the significant investment losses first recognized in contribution rates in the December 31, 2009 actuarial valuation, the rate collar has deferred a significant portion of the rate increase calculated in the most recent two rate-setting valuations. In the December 31, 2012 valuation, the SLGRP has a calculated contribution rate, prior to application of the rate collar, which still exceeds the maximum rate allowed by the collar. By contrast, the contribution rate calculated for the School District pool is no longer limited by the collar. The impact of the adjustment for each group is shown below. The contribution rate increase deferred for the SLGRP will be reflected in future rate-setting periods. In other words, if all assumptions are met, in addition to the increases effective for the July 1, 2015 to June 30, 2017 biennium illustrated in this report on an advisory basis, we would expect additional increases for the SLGRP in the July 1, 2017 to June 30, 2019 biennium.

Collar Impact on Tier 1/Tier 2 Pension Contribution Rates		
Advisory July 1, 2015		
	SLGRP	School Districts
Total Pension Rate Before Collar	21.53%	24.54%
Collar Adjustment	(3.30%)	0.00%
Total Pension Rate After Collar	18.23%	24.54%
Average Adjustment	(5.29%)	(9.33%)
Net Pension Rate	12.94%	15.21%

Retiree Healthcare Contribution Rates

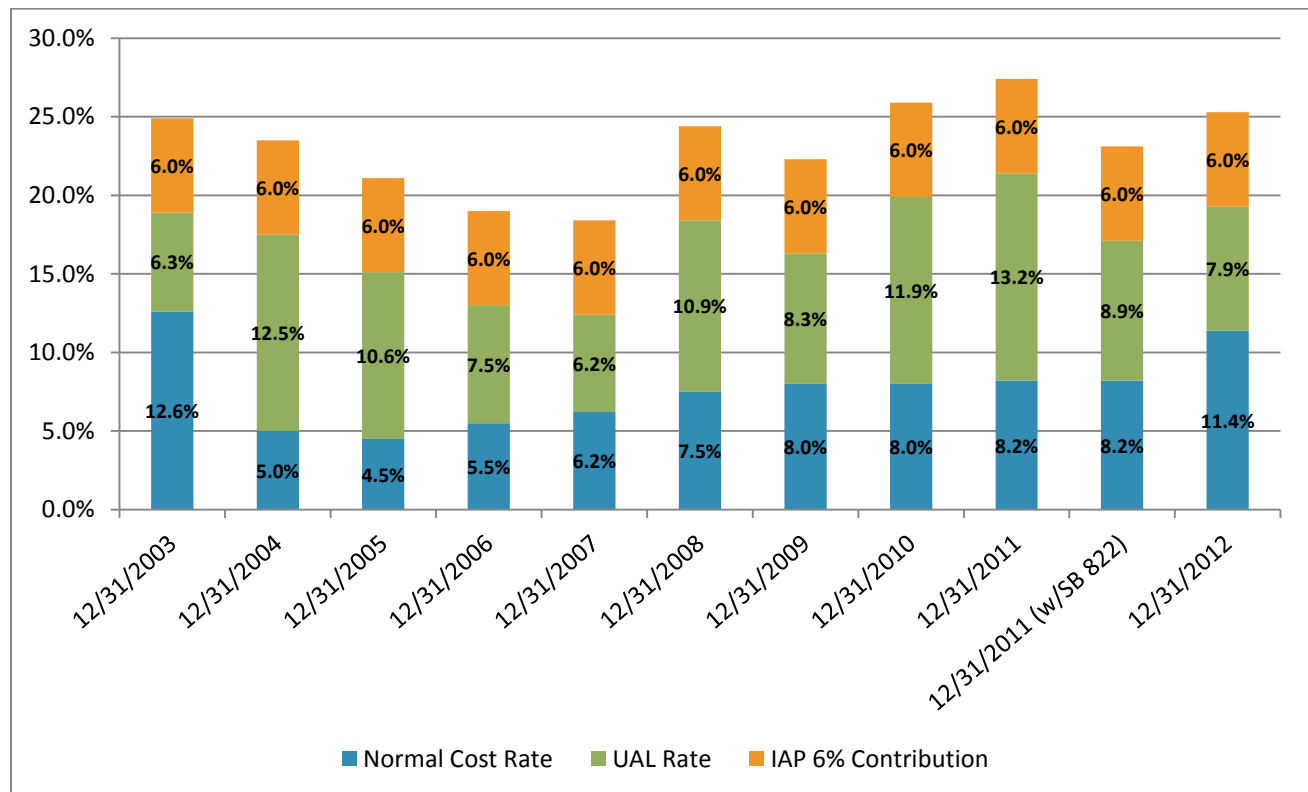
In addition to the pension contribution rates, all employers also contribute to the Retirement Health Insurance Account (RHIA). Further, State Agencies and State Judiciary contribute to the Retiree Health Insurance Premium Account (RHIPA). Only Tier 1 and Tier 2 members are eligible for these benefits, so the normal cost rates are only charged to Tier 1/Tier 2 payroll, but the UAL rates are charged to all payrolls. For each type of payroll used in this valuation the table below compares the advisory employer contribution rates calculated in this valuation to the rates in effect from July 1, 2013 through June 30, 2015.

Retiree Healthcare Contribution Rates						
Payroll	Advisory July 1, 2015			Effective July 1, 2013		
	Tier 1/Tier 2	OPSRP General Service	OPSRP Police & Fire	Tier 1/Tier 2	OPSRP General Service	OPSRP Police & Fire
RHIA Normal Cost Rate	0.08%	0.00%	0.00%	0.10%	0.00%	0.00%
RHIA UAL Rate	0.48%	0.48%	0.48%	0.49%	0.49%	0.49%
Total RHIA rate	0.56%	0.48%	0.48%	0.59%	0.49%	0.49%
RHIPA Normal Cost Rate	0.09%	0.00%	0.00%	0.07%	0.00%	0.00%
RHIPA UAL Rate	0.34%	0.34%	0.34%	0.20%	0.20%	0.20%
Total RHIPA rate	0.43%	0.34%	0.34%	0.27%	0.20%	0.20%

Combined Pension and Retiree Healthcare Contribution Rates

The system-wide average combined pension and retiree healthcare contribution rates are shown below for each valuation since December 31, 2003. As shown below, the average normal cost rate declined dramatically after the 2003 valuation, primarily due to the change in the actuarial cost method from EAN to PUC made in the December 31, 2004 valuation. The PUC method allocates benefits projected to be paid under the Money Match formula to past service with a 0% normal cost allocation to current year service. As additional long-service Tier 1 members retired under the Money Match formula, the normal cost rate increased over the subsequent valuations. The change back to the EAN method in this valuation accelerated the increase in the normal cost rate to a full career level, and now is expected drift down gradually in the future toward the OPSRP normal cost rate (currently 7.81%) as new OPSRP members replace retiring Tier 1/Tier 2 members. The UAL rate has decreased since the prior rate-setting valuation at December 31, 2011, as modified by Senate Bill 822, due to further legislative changes to future COLA amounts and investment returns above assumption during 2012. This decrease was partially offset by increases calculated in the prior rate-setting valuation which were deferred by the rate collar contribution stabilization method.

System-Wide Average Contribution Rates – Combined Pension and Retiree Healthcare



For an individual employer, base pension rates are adjusted for side accounts rate offsets to develop net pension rates paid by the employer. Side accounts are the result of employer supplemental deposits, typically financed through a pension obligation bond. When a supplemental deposit is made, a side account is established (after any transition liabilities for joining the SLGRP have been paid) and used to offset the otherwise required contribution. As of December 31, 2012, the system has approximately \$5.5 billion in side accounts, an increase of about \$0.3 billion in the last year. Side accounts now reduce the average advisory employer contribution rate by 5.70% of payroll, but there is wide variation between employers.

For individual employers in the SLGRP, the rates shown above are also adjusted for amortization payments on pre-SLGRP liabilities. The average adjustment to individual employer rates due to side accounts and pre-SLGRP liabilities is shown on a combined basis in the table on page 2.

Limits on Future Pension Contribution Rates

The minimum and maximum rates that can be effective July 1, 2015 for each rate pool (prior to adjustments) are shown in the table below. The limits are calculated and applied on an individual employer basis for independent employers. The contribution rates for individual employers are adjusted from the rates of the pool to reflect side account rate offsets, charges or credits for pre-SLGRP liabilities, and adjustments to the normal cost rates of SLGRP employers to reflect the employer’s ratio of general service to fire and police payroll. These adjustments are not limited by the rate collar.

The size of the rate collar depends on the funded status of a rate pool or employer. When funded status is less than 60 percent or above 140 percent, the size of the rate collar is twice the size of the “single collar” that applies when funded status is between 70 percent and 130 percent. The rate collar provides a graded schedule between the single and double rate collars if the funded status, excluding side accounts, is between 60% and 70% or 130% and 140%.

Limits on Future Pension Contribution Rates		
Effective July 1, 2015		
	Tier 1/Tier 2	
	SLGRP	School Districts
Between 70% and 130% Funded		
Minimum Rate	12.15%	17.24%
Maximum Rate	18.23%	25.86%
Less than 60% or Greater than 140% Funded		
Minimum Rate	9.11%	12.93%
Maximum Rate	21.27%	30.17%

For Rate Pools funded between 60% and 70% or between 130% and 140% the limits vary linearly between the rates shown above.

Funded Status

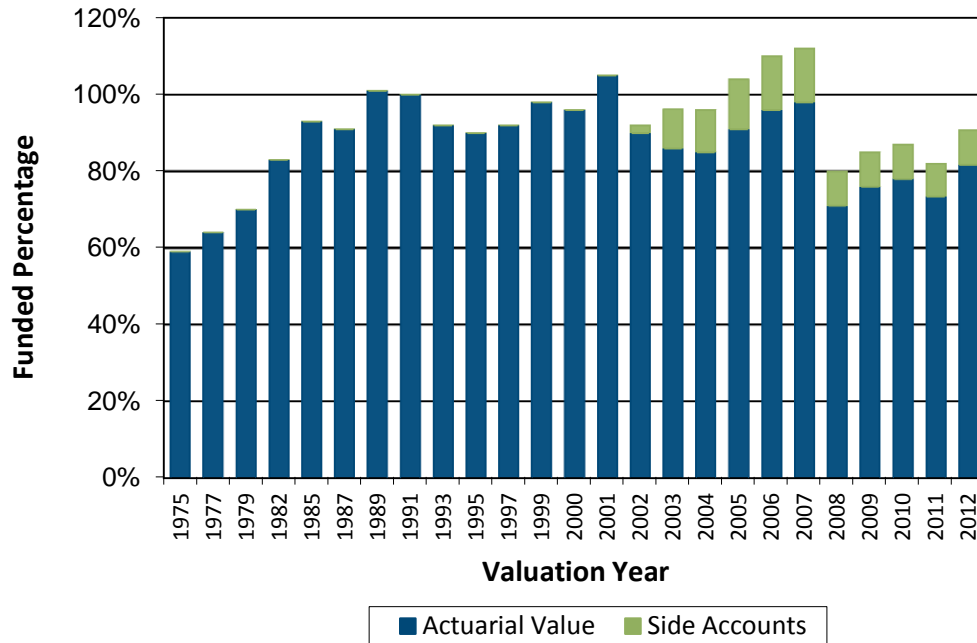
The table below shows the funded status of the various pension rate pools both on the basis used to calculate the contribution rate for each rate pool and after adjustment for side accounts (assuming side accounts offset Tier 1/Tier 2 liabilities). For this exhibit, all independent employers, including State Judiciary, have been grouped together. Note that the decline in the OPSRP funded status comes from the Entry Age cost method assigning a significantly larger share of benefits to past service for a relatively new plan such as OPSRP, which increases the actuarial accrued liability.

	SLGRP	School Districts	Independent Employers	OPSRP	Pension System Totals ¹
December 31, 2012					
Actuarial accrued liability	\$ 30,601.9	\$ 22,908.0	\$ 5,043.4	\$ 1,795.6	\$ 60,405.2
Actuarial value of assets	\$ 25,464.1	\$ 18,329.6	\$ 4,392.0	\$ 1,190.0	\$ 49,265.9
Funded percentage	83.2%	80.0%	87.1%	66.3%	81.6%
Side accounts	\$ 2,558.3	\$ 2,872.5	\$ 87.4	\$ -	\$ 5,518.2
Funded percentage reflecting side accounts	91.6%	92.6%	88.8%	66.3%	90.7%
December 31, 2011					
Actuarial accrued liability	\$ 31,109.1	\$ 23,973.7	\$ 5,069.8	\$ 986.4	\$ 61,198.4
Actuarial value of assets	\$ 23,240.9	\$ 16,964.3	\$ 4,000.4	\$ 840.5	\$ 44,943.1
Funded percentage	74.7%	70.8%	78.9%	85.2%	73.4%
Side accounts	\$ 2,438.3	\$ 2,704.0	\$ 82.8	\$ -	\$ 5,225.1
Funded percentage reflecting side accounts	82.5%	82.0%	80.5%	85.2%	82.0%

Amounts in millions

¹ Includes Multnomah Fire District #10

As shown in the graph below, the funded status of the system generally improved until the market decline of 2000-2002. The restatement of the December 31, 2001 actuarial valuation to reflect the impact of the 2003 reforms mitigates the impact on the reported funded status of the market downturn. Funded status was generally improving for several years due to better than expected investment returns until 2008, when it decreased significantly due to investment losses. The funded status improved in the current valuation due to legislative changes in plan provisions and investment gains during 2012.



The retiree medical benefits are funded using a 401(h) account within the pension trust. The table below shows the funded status of the retiree medical programs. The funded status of the RHIA program improved since the prior valuation due to the increase in RHIA contribution rates effective July 1, 2011. The funded status of the RHIPA program declined since the prior valuation due to both actual participation experience and an updated actuarial assumption about the percentage of Tier 1/Tier 2 retired members that will elect to participate in the RHIPA program when eligible.

	December 31, 2012			December 31, 2011		
	RHIA	RHIPA	Total	RHIA	RHIPA	Total
Actuarial accrued liability	\$471.8	\$60.3	\$532.2	\$461.1	\$34.4	\$495.5
Actuarial value of assets	\$291.6	\$4.4	\$296.0	\$239.6	\$4.5	\$244.1
Funded Percentage	61.8%	7.4%	55.6%	52.0%	13.2%	49.3%
<i>Amounts in millions</i>						

Asset Changes

Since December 31, 2011, contributions (including supplemental deposits but excluding side account rate offset transfers) for pension benefits have increased assets by 1.8% while benefit payments decreased assets by about 6.6%. On the whole, assets increased by 9% due to investment returns of approximately 14.7%.

All Reserves	Amount	Percentage of 12/31/2011 Market Value
Market value, December 31, 2011	\$ 51,388.8	
Contributions	928.7	1.8%
Investment Income	7,203.9	14.0%
Benefit Payments	(3,403.7)	(6.6%)
Market value, December 31, 2012	\$ 56,117.6	109.2%
<i>Amounts in millions</i>		

The Tier 1 Rate Guarantee Reserve that is used to pay for the interest crediting rate guarantee on active Tier 1 member accounts when actual investment earnings are below the assumed rate has improved from a deficit of \$0.3 billion as of December 31, 2011 to a deficit of \$300,000 as of December 31, 2012 due to investment performance above assumption in 2012. Tier 1 member accounts that are linked to the Rate Guarantee Reserve decreased from \$6.5 billion on December 31, 2011 to \$6.3 billion on December 31, 2012.

Market values are reported to Milliman by PERS. It is our understanding that select real estate and private equity investments are reported on a three-month lag basis. This valuation report does not attempt to quantify any such effects.

Liability Changes

Since December 31, 2011, the system-wide actuarial accrued liability has decreased due to the legislative changes discussed above, though this was offset somewhat by changes to actuarial methods and assumptions. The normal cost, or the value of benefits assigned to that year of service, was about one-fifth of the value of benefits paid out during the year. The remaining 0.3% decrease in the actuarial accrued liability was attributable to demographic experience.

	Amount	Percentage of 12/31/2011 AAL
Actuarial Accrued Liability, December 31, 2011	\$ 61,694.0	
Normal Cost	704.8	1.1%
Benefit Payments	(3,403.7)	(5.5%)
Interest	4,855.8	7.9%
Assumption & Method Changes	2,496.6	4.0%
Plan Changes	(5,243.5)	(8.5%)
Other	(166.5)	(0.3%)
Actuarial Accrued Liability, December 31, 2012	\$ 60,937.3	98.8%
<i>Amounts in millions</i>		

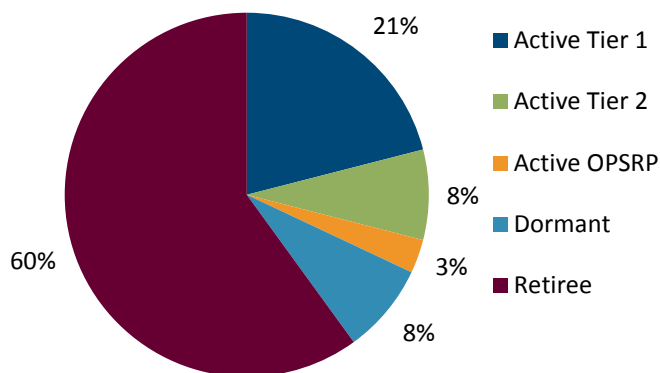
The Oregon Public Employees Retirement System is a very mature system. There are currently 1.37 active members in the system for every annuitant (including retired members and beneficiaries). By comparison, the average ratio in NASRA's 2012 Public Fund Survey is 1.65. Since contributions to the system are based on active payroll, a lower ratio means there are fewer actives to support any gains or losses, such as investment

experience varying from assumption, in comparison to other systems. The ratio of active members to annuitants may decline further as a significant portion of the active members are currently eligible to retire.

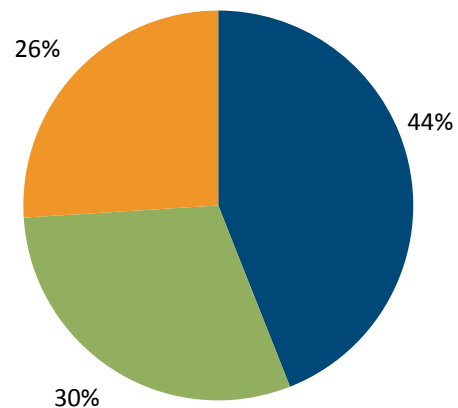
The left-hand chart below illustrates the distribution of the system’s accrued liability by member pension tier and status. While the majority of active liability is attributable to Tier 1 members, 68% of the system’s total accrued liability is due to members who are no longer actively working in covered employment. Only 11% of the liability is attributable to active Tier 2 and OPSRP members. Of the accrued liability that is attributable to actives, a large portion is located at or near prime retirement ages.

The right-hand chart below illustrates the distribution of the system’s normal cost. Tier 2 members account for nearly a third of the system’s normal cost compared to about 8% of the system’s accrued liability. OPSRP members account for 26% of the normal cost compared to just 3% of the accrued liability.

Actuarial Accrued Liability by Member Category



Normal Cost by Member Category



Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described after the summary. Combined valuation payroll includes Tier 1/Tier 2 payroll and OPSRP payroll.

	Actuarial Valuation as of		Percent Change
	December 31, 2012	December 31, 2011	
Tier 1/Tier 2 Pension			
Actuarial accrued liability	\$ 58,609.6	\$ 60,212.0	(3%)
Actuarial value of assets	\$ 48,075.9	\$ 44,102.6	9%
Unfunded actuarial accrued liability	\$ 10,533.7	\$ 16,109.4	(35%)
Funded status	82%	73%	
UAL as a percentage of payroll	123%	188%	
Normal cost	\$ 718.6	\$ 505.0	42%
Tier 1/Tier 2 valuation payroll	\$ 5,341.7	\$ 5,607.9	(5%)
Normal cost rate	13.45%	9.00%	
OPSRP Pension			
Actuarial accrued liability	\$ 1,795.6	\$ 986.4	82%
Actuarial value of assets	\$ 1,190.0	\$ 840.5	42%
Unfunded actuarial accrued liability	\$ 605.5	\$ 145.9	315%
Funded status	66%	85%	
UAL as a percentage of payroll	7%	2%	
Normal cost	\$ 253.6	\$ 193.0	31%
OPSRP valuation payroll	\$ 3,249.2	\$ 2,942.6	10%
Normal cost rate	7.81%	6.56%	
Combined Pension			
Actuarial accrued liability	\$ 60,405.2	\$ 61,198.4	(1%)
Actuarial value of assets	\$ 49,265.9	\$ 44,943.1	10%
Unfunded actuarial accrued liability	\$ 11,139.3	\$ 16,255.3	(31%)
Funded status	82%	73%	
Combined valuation payroll	\$ 8,590.9	\$ 8,550.5	0%
UAL as a percentage of payroll	130%	190%	
Normal cost	\$ 972.2	\$ 698.0	39%
Combined valuation payroll	\$ 8,590.9	\$ 8,550.5	0%
Normal cost rate	11.32%	8.16%	
<i>Amounts in millions</i>			

Actuarial Valuation as of				Percent Change
	December 31, 2012	December 31, 2011		
RHIA				
Actuarial accrued liability	\$ 471.8	\$ 461.1		2%
Actuarial asset value	\$ 291.6	\$ 239.6		22%
Unfunded actuarial accrued liability	\$ 180.2	\$ 221.5		(19%)
Funded status	62%	52%		
Combined valuation payroll	\$ 8,590.9	\$ 8,550.5		0%
UAL as a percentage of payroll	2%	3%		
Normal cost	\$ 4.4	\$ 5.8		(24%)
Tier 1/Tier 2 valuation payroll	\$ 5,341.7	\$ 5,607.9		(5%)
Normal cost rate	0.08%	0.10%		
RHIPA				
Actuarial accrued liability	\$ 60.3	\$ 34.4		75%
Actuarial asset value	\$ 4.4	\$ 4.5		(2%)
Unfunded actuarial accrued liability	\$ 55.9	\$ 29.9		87%
Funded status	7%	13%		
Combined valuation payroll	\$ 2,432.4	\$ 2,376.9		2%
UAL as a percentage of payroll	2%	1%		
Normal cost	\$ 1.4	\$ 1.1		23%
Tier 1/Tier 2 valuation payroll	\$ 1,478.4	\$ 1,539.5		(4%)
Normal cost rate	0.09%	0.07%		
<i>Amounts in millions</i>				

Data Summary

A brief summary of the data underlying the current and prior valuation follows. Additional detail can be found in the data section of this report. State Judiciary is included in the Tier 1 counts.

	December 31				
	2012				2011
	Tier 1	Tier 2	OPSRP	Total	Total
Active Members					
Count	42,776	46,661	77,666	167,103	170,972
Average age	54.4	48.4	41.8	46.9	46.6
Average total service	22.2	12.2	4.9	11.4	11.0
Average prior year covered salary	\$ 65,737	\$ 56,008	\$ 39,375	\$ 50,768	\$ 49,388
Dormant Members¹					
Count	19,668	16,397	5,806	41,871	40,507
Average age	57.3	50.6	44.9	53.0	52.9
Average monthly deferred benefit	\$ 2,116	\$ 641	\$ 283	\$ 1,284	\$ 1,235
Retired Members and Beneficiaries¹					
Count	114,045	7,410	582	122,037	118,408
Average age	71.2	65.6	64.9	70.8	70.6
Average monthly benefit	\$ 2,422	\$ 879	\$ 351	\$ 2,318	\$ 2,265
Total members	176,489	70,468	84,054	331,011	329,887

1. Dormant and Retiree counts are shown by lives within the system. In other words, a member is counted once for purposes of this exhibit, regardless of their service history for different rate pools. This contrasts with the method used to count inactive participants in some of the later exhibits of this report.

Effects of Changes

Effective with the December 31, 2012 actuarial valuation the following changes were made. Please refer to the 2012 Experience Study for more detail on assumption and method changes.

Cost Method

The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

Assumption Changes

The following assumption changes were made the prior valuation:

- Assumed investment returns were lowered to 7.75% from the previously assumed 8.00%.
- Interest crediting on regular and variable member accounts was also lowered to 7.75%.
- Mortality, disability and retirement rates were updated for some groups to more closely match observed experience.
- Termination assumptions were changed to be based on duration of service.

- Assumptions for merit increases, unused sick leave, and vacation pay were updated.
- The assumed healthcare cost trend rates for the RHIPA program as well as the participation assumptions for both RHIA and RHIPA were updated.

Method Changes

The Tier 1/Tier 2 UAL will be re-amortized over a closed 20-year period as of December 31, 2013 (the next rate-setting valuation).

In addition, the “grade-in range” over which the rate collar doubles was modified.

Plan Changes

Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.

Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first \$60,000 of annual benefit and 0.15% on annual benefits above \$60,000. The effects of this legislation were reflected in this valuation.

Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

System-Wide Assets

System-Wide Assets

The table below reconciles the market value of assets, as provided by PERS, to the asset values used in this valuation.

	Tier 1/Tier 2	OPSRP	Side Accounts	Contingency and Capital Preservation Reserve	Rate Guarantee Reserve	RHIA and RHIPA	System Totals
Amount reported by PERS December 31, 2012	\$ 48,513.5	\$ 1,190.0	\$ 5,518.2	\$ 600.2	\$ (0.3)	\$ 296.0	\$ 56,117.6
Adjustment for Negative Rate Guarantee Reserve	\$ (0.3)	-	\$ -	\$ -	\$ 0.3	\$ -	\$ -
Net Pre-SLGRP Liabilities	\$ (437.3)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (437.3)
December 31, 2012 Actuarial Value of Assets	\$ 48,075.9	\$ 1,190.0	\$ 5,518.2	\$ 600.2	\$ -	\$ 296.0	\$ 55,680.3
<i>Amounts in millions</i>							

PERS calculates the amount that should be transferred from side accounts to employer reserves in Tier 1/ Tier 2 and OPSRP for rate relief on a monthly basis. PERS does not track net Pre-SLGRP liabilities.

Employer supplemental deposits establish individual side accounts within the pension trust. The side accounts are treated as prepaid contributions. Employer contribution rates are first determined excluding side accounts. Then, an amortized portion of the side account is used to offset the contribution otherwise required for the individual employers that have side accounts. While side accounts are excluded from valuation assets in determining contribution rates for each of the rate pools, side accounts are included in valuation assets for financial reporting purposes such as the reporting of funded status.

In addition, pension assets are held in the Contingency Reserve, the Capital Preservation Reserve, and the Tier 1 Rate Guarantee Reserve. As shown below, at December 31, 2011 the Tier 1 Rate Guarantee Reserve (RGR) was in deficit status of \$345.3 million. Crediting towards the RGR deficit during 2012, because the earnings on Tier 1 member reserves was greater than the assumed rate with which they are credited, brought the overall balance near to zero. The adjustment to Tier 1/Tier 2 valuation assets to account for the deficit status of the Tier 1 Rate Guarantee Reserve is shown in the table above. It is our understanding that if a deficit persists for five years, employers may be required to restore the Tier 1 Rate Guarantee Reserve.

Tier 1/Tier 2 assets are adjusted by the net outstanding balance of pre-SLGRP liabilities to arrive at the actuarial value of assets. These notional employer-specific balances, created at the formation of the SLGRP and at later dates when additional employers join the pool, are treated akin to receivables to the SLGRP from individual employers (for pre-SLGRP liabilities) or payables – in the form of future rate offsets – from the SLGRP assets to individual employers (for pre-SLGRP surpluses).

Finally, assets are held in separate accounts established under Internal Revenue Code Section 401(h) (the Retirement Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA)) to provide retiree medical benefits.

The following table reconciles the changes in the system-wide assets from December 31, 2011 to December 31, 2012. The reconciliation of assets is provided by PERS.

Reconciliation of Pension and Retiree Healthcare Assets	Tier 1/Tier 2	OPSRP	Side Accounts	Contingency Reserve	Capital Preservation Reserve	Rate Guarantee Reserve	RHIA and RHIPA	System Totals
Additions								
1. Contributions								
a. Employer	\$ 653.0	\$ 209.9	\$ -	\$ -	\$ -	\$ -	\$ 51.6	\$ 914.5
b. Transfer from side accounts ¹	\$ 442.8	\$ -	\$ (442.8)	\$ -	\$ -	\$ -	\$ -	\$ -
c. Judge member contributions	\$ 1.5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.5
d. Member service purchases	\$ 12.6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12.6
e. Total	\$ 1,109.9	\$ 209.9	\$ (442.8)	\$ -	\$ -	\$ -	\$ 51.6	\$ 928.7
2. Net investment income								
a. Transfers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
b. From investments	\$ 5,903.8	\$ 150.4	\$ 736.0	\$ 64.9	\$ -	\$ 344.9	\$ 35.6	\$ 7,235.7
c. Total	\$ 5,903.8	\$ 150.4	\$ 736.0	\$ 64.9	\$ -	\$ 344.9	\$ 35.6	\$ 7,235.7
3. Other ²	\$ 1.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.0
4. Total additions	\$ 7,014.7	\$ 360.3	\$ 293.2	\$ 64.9	\$ -	\$ 344.9	\$ 87.2	\$ 8,165.3
Deductions								
5. Retirement and survivor benefits	\$ (3,340.8)	\$ (5.5)	\$ -	\$ -	\$ -	\$ -	\$ (34.3)	\$ (3,380.7)
6. Death Benefits	\$ (5.1)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (5.1)
7. Refund of contributions	\$ (18.0)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (18.0)
9. Administrative expenses	\$ (26.4)	\$ (5.3)	\$ (0.2)	\$ -	\$ -	\$ -	\$ (1.0)	\$ (32.8)
10. Total deductions	\$ (3,390.2)	\$ (10.8)	\$ (0.2)	\$ -	\$ -	\$ -	\$ (35.3)	\$ (3,436.5)
11. Net change	\$ 3,624.5	\$ 349.5	\$ 293.0	\$ 64.9	\$ -	\$ 344.9	\$ 51.9	\$ 4,728.8
12. Net assets held in trust for pension benefits								
a. Beginning of year	\$ 44,889.0	\$ 840.5	\$ 5,225.1	\$ 535.3	\$ -	\$ (345.3)	\$ 244.1	\$ 51,388.8
b. End of year	\$ 48,513.5	\$ 1,190.0	\$ 5,518.2	\$ 600.2	\$ -	\$ (0.3)	\$ 296.0	\$ 56,117.6
<i>Amounts in millions</i>								

¹ Side account transfers shown in this exhibit are all credited to Tier 1/Tier 2 assets. We understand the portion to be credited to OPSRP is credited through the employer contribution line of the exhibit.

² Includes TRFA transfer from MetLife and adjustments by PERS.

Reconciliation of Side Accounts

Side accounts are established for employers who make supplemental payments (a lump sum payment in excess of the required employer contribution). For SLGRP employers, this supplemental payment is first applied toward the employer's Transition Liability, and any excess is established in a Side Account. A reconciliation of the side accounts from December 31, 2011, to December 31, 2012, is shown below on a rate pool basis. For this exhibit, all independent employers are grouped together.

	SLGRP	School Districts	Independent Employers	System Totals
Side Accounts, December 31, 2011	2,438.3	2,704.0	82.8	5,225.1
Deposits during 2012	-	-	-	-
Interest	342.3	382.0	11.7	736.0
Administrative expenses	(0.0)	(0.1)	(0.0)	(0.2)
Transfers to employer reserves	(222.4)	(213.3)	(7.1)	(442.8)
Side Accounts, December 31, 2012	2,558.3	2,872.5	87.4	5,518.2

Amounts in millions

Development of Side Account Rate Relief

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period and expressing the result as a percentage of combined valuation payroll. For side accounts established on or before December 31, 2009, the fixed period ends December 31, 2027. For side accounts established later, the fixed period ends 18 years after the first rate-setting valuation following its creation. The table below shows the average rate relief attributable to side accounts for each rate pool.

	December 31, 2012			
	SLGRP	School Districts	Independent Employers	System Totals
1. Side Account	\$ 2,558.3	\$ 2,872.5	\$ 87.4	\$ 5,518.2
2. Combined valuation payroll	\$ 5,018.0	\$ 2,731.5	\$ 841.3	\$ 8,590.9
3. Average Amortization Factor ¹	11.272	11.272	11.272	11.272
4. Average Side Account Rate Relief (1. ÷ 2. ÷ 3.)	4.52%	9.33%	0.92%	5.70%

Amounts in millions

¹ Weighted average

Pension Plan Valuation



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Tier 1/Tier 2 Pension Assets

Summary of Actuarial Value of Assets

This section summarizes the current Tier 1/Tier 2 pension valuation assets as of the current and prior actuarial valuation. For valuation purposes, pension assets are divided among the State & Local Government Rate Pool (SLGRP), the School District Pool, and various independent employers to determine employer contribution rates. For this system-wide report, all independent employers, including State Judiciary, have been grouped together as if they were a rate pool.

	SLGRP	School Districts	Independent Employers	Tier 1/Tier 2 Totals ¹
December 31, 2012				
Member reserves ²	\$ 4,460.3	\$ 2,575.3	\$ 668.6	\$ 7,704.5
Employer reserves	10,941.5	6,457.5	1,965.7	19,221.5
Benefit in force reserves	10,499.6	9,296.9	1,757.8	21,587.2
Net outstanding pre-SLGRP liabilities	(437.3)			(437.3)
Total actuarial value of assets	\$ 25,464.1	\$ 18,329.6	\$ 4,392.0	\$ 48,075.9
December 31, 2011				
Member reserves	\$ 4,288.0	\$ 2,498.5	\$ 647.5	\$ 7,434.4
Employer reserves	9,627.1	5,547.2	1,726.1	16,764.9
Benefit in force reserves	9,767.0	8,918.5	1,626.7	20,344.4
Net outstanding pre-SLGRP liabilities	(441.2)			(441.2)
Total actuarial value of assets	\$ 23,240.9	\$ 16,964.3	\$ 4,000.4	\$ 44,102.6
<i>Amounts in millions</i>				

¹ Includes Multnomah Fire District #10.

² For the valuation, reported member reserves were reduced by \$0.3 million to reflect the deficit status of the Tier 1 Rate Guarantee Reserve.

Please note that pre-SLGRP liabilities and surpluses are notional balances specific to specific employers or groups of employers. For contribution rate calculations, pre-SLGRP liabilities are treated akin to receivables to the SLGRP from the individual employers and pre-SLGRP surpluses are treated akin to payables (in the form of future rate offsets) from the SLGRP assets to individual employers. The assets of the SLGRP used to calculate the pooled contribution rate reflect the net outstanding balance of these items.

Side accounts are treated as pre-paid contributions. Consequently, they are not reflected in the actuarial value of assets shown above. The actuarial value of assets for each rate pool is used to develop the contribution rate for that pool. Side accounts are used by employers to pay a portion of the base contribution rate via a side account rate offset and deduction mechanism. The net impact of side accounts is shown in a separate section of this report.

Reconciliation of Actuarial Value of Assets

The table below shows a reconciliation of the actuarial value of assets from the prior valuation to the current valuation for each of the rate pools. Again, independent employers, including State Judiciary, are treated as if they were a single rate pool for purposes of the system-wide report.

	SLGRP	School Districts	Independent Employers	Tier 1/Tier 2 Totals ¹
Actuarial value of assets, December 31, 2011	\$ 23,240.9	\$ 16,964.3	\$ 4,000.4	\$ 44,102.6
Contributions				
Employer	\$ 372.7	\$ 233.8	\$ 83.0	\$ 689.5
Side account transfers	222.4	213.3	7.1	442.8
Member	0.0	0.0	1.5	1.5
Total contributions	595.0	447.1	91.6	1,133.7
Investment income	3,084.5	2,220.2	532.7	5,820.3
Benefit payments and expenses	(1,649.0)	(1,460.1)	(276.1)	(3,390.4)
Adjustments ²	192.7	158.3	43.3	409.6
Actuarial value of assets, December 31, 2012	\$ 25,464.1	\$ 18,329.6	\$ 4,392.0	\$ 48,075.9
<i>Amounts in millions</i>				

¹ Includes Multnomah Fire District #10.

² Adjustments include a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, member service purchases and other adjustments made by PERS.

Outstanding Balance of Pre-SLGRP Liabilities

In the valuation, pre-SLGRP liabilities are treated as assets of the SLGRP. That is, a pre-SLGRP liability is essentially a receivable owed to the SLGRP by the employer. Pre-SLGRP surpluses are essentially payables from the SLGRP to employers.

Prior to the formation of the SLGRP, the State and Community Colleges were pooled together and some employers participated in the Local Government Rate Pool (LGRP). The UAL attributable to the State and Community Colleges or the LGRP at the time the SLGRP was formed is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate.

Similarly, when an independent employer joins the SLGRP, a transition liability or surplus is calculated to ensure that each employer enters the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the pre-SLGRP pooled liability attributable to the State and Community Colleges and the LGRP from the last valuation to the current valuation. It also shows the reconciliation of the total transition liability or surplus from the last valuation to the current valuation.

	State and Community Colleges	Local Government Rate Pool	Transition	Total
1. Pre-SLGRP liability/(surplus), January 1, 2012	\$ 598.8	\$ (250.1)	\$ (790.0)	\$ (441.4)
2. Employer contributions	(53.5)	21.6	68.3	36.5
3. Supplemental payments	0.0	0.0	0.0	0.0
4. Interest	43.6	(18.3)	(57.7)	(32.4)
5. Pre-SLGRP liability/(surplus), December 31, 2012 (1. + 2. + 3. + 4.)	\$ 588.9	\$ (246.7)	\$ (779.5)	\$ (437.3)
<i>Amounts in millions</i>				

Tier 1/Tier 2 Pension Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the percent of payroll that would need to be contributed each year to fund plan benefits.

A summary of the normal cost by decrement is shown below on a system-wide basis for the Tier 1/Tier 2 pension benefits.

	December 31, 2012	December 31, 2011	Percent Change
Normal Cost			
Service Retirement	469.0	468.4	
Withdrawal	222.8	27.8	
Duty Disability	3.3	1.2	
Nonduty Disability	16.1	7.6	
Death	7.3	0.0	
Total Normal Cost	718.6	505.0	42.3%
<i>Amounts in millions</i>			

The significant increase in normal cost since the prior valuation is primarily due to the change in actuarial cost method. The cost method used in the prior valuation allocated benefits under the Money Match formula entirely to prior years of service because no additional member contributions are permitted. Consequently, members who are expected to retire under the Money Match formula had no normal cost. In contrast, the cost method adopted for the current valuation allocates the cost of benefits across the full working career, regardless of the manner in which they actually accrue. Because of this members expected to retire under Money Match have a non-zero normal cost in the December 31, 2012 valuation.

The table below reconciles the normal cost from the prior valuation to the current valuation.

Reconciliation of Change in Normal Cost

Tier 1/Tier 2 Pension	
Normal Cost, December 31, 2011	\$ 505.0
Expected increase	20.8
Assumption and method changes	270.2
Plan changes	(57.1)
Deviations from expected experience	
Pay increases	(17.0)
Interest crediting experience	(0.9)
All other sources	(2.3)
Total demographic (gains) and losses	(20.3)
Normal Cost, December 31, 2012	\$ 718.6
<i>Amounts in millions</i>	

A summary of the normal cost by tier and employment category for each rate pool is shown below. Again, independent employers, including State Judiciary, are treated as if they were a single rate pool for purposes of the system-wide report.

	Summary of Pension Normal Cost by Group and Tier				December 31, 2011 Tier 1/ Tier 2 Totals	Percent Change
	December 31, 2012			Tier 1/ Tier 2 Totals		
	SLGRP	School Districts	Independent Employers	Tier 1/ Tier 2 Totals		
Normal Cost						
Tier 1 General Service	209.1	131.5	29.3	369.8	156.6	136.1%
Tier 2 General Service	125.2	85.2	18.6	229.0	239.0	(4.2%)
Tier 1 Police & Fire	44.7	0.3	16.0	60.9	54.0	12.8%
Tier 2 Police & Fire	45.2	0.2	13.4	58.8	55.4	6.2%
Total Normal Cost	424.1	217.2	77.3	718.6	505.0	42.3%
<i>Amounts in millions</i>						

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. A summary of the actuarial accrued liability is shown below on a system-wide basis for the Tier 1/Tier 2 pension benefits.

	December 31, 2012	December 31, 2011	Percent Change
Active Members	17,554.9	18,473.0	(5.0%)
Dormant Members	4,677.4	4,737.9	(1.3%)
Retired Members and Beneficiaries	36,377.3	37,001.1	(1.7%)
Total Actuarial Accrued Liability	58,609.6	60,212.0	(2.7%)
<i>Amounts in millions</i>			

Actuarial Accrued Liability

A summary of actuarial accrued liabilities based on member status, tier and employment category is shown in the table below. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

	December 31, 2012				December 31, 2011		Percent Change
	SLGRP	School Districts	Independent Employers	Tier 1 / Tier 2 Totals ¹	Tier 1 / Tier 2 Totals ¹		
Active Members							
Tier 1 General Service	5,991.8	4,313.6	768.7	11,074.1	12,990.0	(14.7%)	
Tier 1 Police & Fire	1,202.2	4.7	456.4	1,663.4	1,697.0	(2.0%)	
Tier 1 Total	7,194.1	4,318.3	1,225.1	12,737.6	14,686.9	(13.3%)	
Tier 2 General Service	2,128.7	1,466.4	323.0	3,918.1	3,095.6	26.6%	
Tier 2 Police & Fire	695.1	3.4	200.7	899.2	690.5	30.2%	
Tier 2 Total	2,823.8	1,469.8	523.8	4,817.3	3,786.1	27.2%	
Total Active Members	10,017.8	5,788.1	1,748.9	17,554.9	18,473.0	(5.0%)	
Dormant Members	2,890.8	1,453.3	332.5	4,677.4	4,737.9	(1.3%)	
Retired Members and Beneficiaries	17,693.3	15,666.6	2,962.1	36,377.3	37,001.1	(1.7%)	
Total Tier 1/ Tier 2 Pension Liability, December 31,	30,601.9	22,908.0	5,043.4	58,609.6	60,212.0	(2.7%)	
<i>Amounts in millions</i>							

¹ Includes Multnomah Fire District #10.

Actuarial Accrued Liability

The change in actuarial accrued liability since the last valuation reflects the experience of the system. The table below reconciles the actuarial accrued liability from the last valuation to this valuation. The actuarial accrued liability is expected to increase due to benefits earned during the year and interest, and to decrease due to benefits paid during the year.

The changes to actuarial assumptions and methods made with the current valuation, including lowering the assumed investment return assumption to 7.75%, increased accrued liability by approximately \$1.8 billion. Legislative changes made to the system lowered the accrued liability by over \$5 billion.

	Tier 1/Tier 2 Pension
Actuarial Accrued Liability December 31, 2011	60,212.0
Expected change	1,864.0
Assumption and method changes	1,785.6
Plan changes	(5,100.3)
Deviations from expected experience	
Retirements from active status	(45.4)
Disability retirements	(1.2)
Active mortality and withdrawal	32.4
Pay increases	(140.8)
Interest Crediting Experience	81.3
Inactive mortality	(129.5)
COLA Experience	-
Data Corrections	53.4
Other	(1.8)
Total demographic (gains) and losses	(151.7)
Actuarial Accrued Liability December 31, 2012	58,609.6
<i>Amounts in millions</i>	

Tier 1/Tier 2 Pension Unfunded Accrued Liability (UAL)

Calculation of UAL

The Unfunded Accrued Liability (UAL) represents the difference between the actuarial accrued liability and the valuation assets. To determine employer contribution rates, the UAL is calculated excluding side accounts. The calculated contribution rate is later offset by an amortized portion of the side accounts for individual employers with such accounts. A summary of the UAL by rate pool is shown on the following table. All independent employers, including State Judiciary, have been grouped together.

	SLGRP	School Districts	Independent Employers	Tier 1 / Tier 2 Totals ¹
December 31, 2012				
1. Actuarial accrued liability	30,601.9	22,908.0	5,043.4	58,609.6
2. Actuarial value of assets	25,464.1	18,329.6	4,392.0	48,075.9
3. Unfunded accrued liability	5,137.8	4,578.3	651.4	10,533.7
4. Funded percentage (2. ÷ 1.)	83.2%	80.0%	87.1%	82.0%
5. Combined Valuation Payroll	5,018.0	2,731.5	841.3	8,590.9
6. Unfunded accrued liability as % of combined valuation payroll (3. ÷ 5.)	102.4%	167.6%	77.4%	122.6%
December 31, 2011				
1. Actuarial accrued liability	31,109.1	23,973.7	5,069.8	60,212.0
2. Actuarial value of assets	23,240.9	16,964.3	4,000.4	44,102.6
3. Unfunded accrued liability	7,868.2	7,009.5	1,069.4	16,109.4
4. Funded percentage (2. ÷ 1.)	74.7%	70.8%	78.9%	73.2%
5. Combined Valuation Payroll	4,935.7	2,786.0	828.9	8,550.5
6. Unfunded accrued liability as % of combined valuation payroll (3. ÷ 5.)	159.4%	251.6%	129.0%	188.4%
<i>Amounts in millions</i>				

¹ Includes Multnomah Fire District #10.

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumption, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL for each rate pool and independent employer will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized UAL balances as of December 31, 2012, have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

The UAL amortization schedules are shown for the SLGRP and School District rate pools below. UAL bases for independent employers are developed individually for each employer, and are shown in the employer's individual valuation report.

SLGRP					
Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	5,137.8	371.9
Total	\$ -	\$ -	\$ -	\$ 5,137.8	\$ 371.9
School Districts					
Amortization Base	UAL December 31, 2011	Payment	Interest	UAL December 31, 2012	Next Year's Payment
December 31, 2012	N/A	N/A	N/A	4,578.3	331.4
Total	\$ -	\$ -	\$ -	\$ 4,578.3	\$ 331.4
<i>Amounts in millions</i>					

Actuarial Gain or Loss since Prior Valuation

In every actuarial valuation, assumptions are made as to the future experience of the plan and covered group of participants. Whenever there is a difference between the actual experience and that anticipated by the actuarial assumptions, there is a gain or loss to the plan. Gains are the result of experience that is more favorable than anticipated (i.e., serves to reduce the unfunded accrued liability or increase the surplus), while losses are the result of unfavorable experience.

The table below shows the development of the actuarial gain (or loss) for the Tier 1/Tier 2 pension benefits for the year ending December 31, 2012. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

	December 31, 2012			
	SLGRP	School District	Independent Employers	Tier 1/Tier 2 Totals ¹
1. Expected actuarial accrued liability				
a. Actuarial accrued liability at January 1, 2012	\$ 31,109.1	\$ 23,973.7	\$ 5,069.8	\$ 60,212.0
b. Normal cost at January 1, 2012	290.9	153.7	60.5	505.0
c. Benefit payments for fiscal year ending December 31, 2012	(1,636.1)	(1,448.7)	(273.9)	(3,363.8)
d. Interest	2,446.6	1,872.2	399.5	4,722.8
e. Expected actuarial accrued liability before changes (a. + b. + c. + d.)	\$ 32,210.4	\$ 24,550.9	\$ 5,255.8	\$ 62,076.0
f. Change in actuarial accrued liability at December 31, 2012, due to assumption, method, and plan changes	(1,644.7)	(1,427.1)	(240.8)	(3,314.7)
g. Expected actuarial accrued liability at December 31, 2012 (e. + f.)	\$ 30,565.7	\$ 23,123.8	\$ 5,015.1	\$ 58,761.3
2. Actuarial accrued liability at December 31, 2012	\$ 30,601.9	\$ 22,908.0	\$ 5,043.4	\$ 58,609.6
3. Liability gain/(loss) (1.g. - 2)	\$ (36.1)	\$ 215.9	\$ (28.3)	\$ 151.7
4. Expected actuarial value of assets				
a. Actuarial value of assets at January 1, 2012	\$ 23,240.9	\$ 16,964.3	\$ 4,000.4	\$ 44,102.6
b. Actual contributions for 2012	595.0	447.1	91.6	1,133.7
c. Benefit payments and expenses for fiscal year ending December 31, 2012	(1,649.0)	(1,460.1)	(276.1)	(3,390.4)
d. Assumed investment return	1,817.1	1,316.6	312.7	3,437.9
e. Expected actuarial value of assets before changes (a. + b. + c. + d.)	\$ 24,004.0	\$ 17,267.8	\$ 4,128.6	\$ 45,283.9
f. Change in actuarial value of assets at December 31, 2012, due to assumption changes	0.0	0.0	0.0	0.0
g. Expected actuarial value of assets at December 31, 2012 (e. + f.)	\$ 24,004.0	\$ 17,267.8	\$ 4,128.6	\$ 45,283.9
5. Actuarial value of assets as of December 31, 2012	\$ 25,464.1	\$ 18,329.6	\$ 4,392.0	\$ 48,075.9
6. Asset gain/(loss) (5. - 4.g.)	\$ 1,460.1	\$ 1,061.8	\$ 263.4	\$ 2,792.0
7. Net actuarial gain/(loss) (3. + 6.)	\$ 1,423.9	\$ 1,277.7	\$ 235.1	\$ 2,943.7

Amounts in millions

¹ Includes Multnomah Fire District #10.

Reconciliation of the UAL

The table below develops the UAL. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

	SLGRP	School Districts	Independent Employers	Tier 1 / Tier 2 Totals ¹
UAL, December 31, 2011	7,868.2	7,009.5	1,069.4	16,109.4
Expected change	933.2	720.7	149.5	1,816.4
Contributions	(595.0)	(447.1)	(91.6)	(1,133.7)
Liability (gain) or loss	36.1	(215.9)	28.3	(151.7)
Asset (gain) or loss	(1,460.1)	(1,061.8)	(263.4)	(2,792.0)
Assumption, method, and plan changes	(1,644.7)	(1,427.1)	(240.8)	(3,314.7)
UAL, December 31, 2012	5,137.8	4,578.3	651.4	10,533.7
<i>Amounts in millions</i>				

¹ Includes Multnomah Fire District #10.

Tier 1/Tier 2 Pension Contribution Rate Development

Normal Cost Rates

The table below shows the development of the system-wide weighted average normal cost rate.

	December 31, 2012	December 31, 2011	Percent Change
Normal Cost			
a. Service Retirement	469.0	468.4	
b. Withdrawal	222.8	27.8	
c. Duty Disability	3.3	1.2	
d. Nonduty Disability	16.1	7.6	
e. Death	7.3	0.0	
f. Total Normal Cost	718.6	505.0	42.3%
Tier 1/ Tier 2 Valuation Payroll	5,341.7	5,607.9	(4.7%)
Average Normal Cost Rate			
a. Service Retirement	8.78%	8.35%	
b. Withdrawal	4.17%	0.50%	
c. Duty Disability	0.06%	0.02%	
d. Nonduty Disability	0.30%	0.13%	
e. Death	0.14%	0.00%	
f. Average Normal Cost Rate	13.45%	9.00%	
<i>Amounts in millions</i>			

The table below shows the development of the normal cost rate for the various rate pools. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

	SLGRP	School Districts	Independent Employers	Tier 1 / Tier 2 Totals
Normal Cost				
Tier 1 General Service	209.1	131.5	29.3	369.8
Tier 2 General Service	125.2	85.2	18.6	229.0
Tier 1 Police & Fire	44.7	0.3	16.0	60.9
Tier 2 Police & Fire	45.2	0.2	13.4	58.8
Total Normal Cost	424.1	217.2	77.3	718.6
Tier 1/ Tier 2 Valuation Payroll				
Tier 1 General Service	1,323.7	915.1	178.6	2,417.4
Tier 2 General Service	1,182.6	851.1	173.7	2,207.4
Tier 1 Police & Fire	249.8	1.4	88.7	340.0
Tier 2 Police & Fire	287.6	1.3	87.9	376.8
Total Valuation Payroll	3,043.7	1,769.0	529.0	5,341.7
Average Normal Cost Rates				
Tier 1 General Service	15.80%	14.37%	16.40%	15.30%
Tier 2 General Service	10.58%	10.02%	10.72%	10.38%
Tier 1 Police & Fire	17.89%	18.17%	17.98%	17.92%
Tier 2 Police & Fire	15.70%	17.76%	15.27%	15.61%
Average Rates				
Tier 1 Average	16.13%	14.37%	16.93%	15.62%
Tier 2 Average	11.59%	10.03%	12.25%	11.14%
General Service Average	13.34%	12.27%	13.60%	12.95%
Police & Fire Average	16.72%	17.98%	16.63%	16.70%
System Average	13.93%	12.28%	14.61%	13.45%
Member Contributions			0.28%	0.03%
Employer System Average	13.93%	12.28%	14.33%	13.42%
<i>Amounts in millions</i>				

UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

The following table develops the UAL rate separately for each of the rate pools. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

	SLGRP	School Districts	Independent Employers	Tier 1 / Tier 2 Totals ¹
December 31, 2012				
1. Total UAL	\$ 5,137.8	\$ 4,578.3	\$ 651.4	\$ 10,533.7
2. Next year's UAL payment	\$ 371.9	\$ 331.4	\$ 47.2	\$ 750.4
3. Combined valuation payroll	\$ 5,018.0	\$ 2,731.5	\$ 841.3	\$ 8,590.9
4. UAL rate (2 ÷ 3)	7.41%	12.13%	5.60%	8.73%
December 31, 2011				
1. Total UAL	\$ 7,868.2	\$ 7,009.5	\$ 1,069.4	\$ 16,109.4
2. Next year's UAL payment	\$ 613.4	\$ 553.7	\$ 81.3	\$ 1,248.4
3. Combined valuation payroll	\$ 4,935.7	\$ 2,786.0	\$ 828.9	\$ 8,550.5
4. UAL rate (2 ÷ 3)	12.43%	19.88%	9.81%	14.60%
<i>Amounts in millions</i>				

¹ While the Tier 1/Tier 2 Total UAL amount includes the UAL for Multnomah Fire District #10 (MFD), the UAL rate for MFD is developed separately in this report and is added to the rates shown in this table.

Pre-SLGRP Pooled Rate

Prior to the formation of the SLGRP, the State and Community Colleges were pooled together and some employers participated in the Local Government Rate Pool (LGRP). The UAL attributable to the State and Community Colleges and the LGRP at the time the SLGRP was formed is maintained separately from the UAL for the SLGRP. The balance of the pre-SLGRP pooled liability attributable to the State and Community Colleges or the LGRP on the valuation date is amortized over the period ending December 31, 2027, and expressed as a percentage of combined valuation payroll.

	December 31, 2012		December 31, 2011	
State and Community College Pool				
1. Total pre-SLGRP pooled liability	\$	588.9	\$	598.8
2. Combined valuation payroll	\$	2,824.7	\$	2,763.7
3. Amortization Factor		11.272		11.626
4. Pre-SLGRP pooled rate (1. ÷ 2. ÷ 3.)		1.85%		1.86%
Local Government Rate Pool				
1. Total pre-SLGRP pooled liability	\$	(246.7)	\$	(250.1)
2. Combined valuation payroll	\$	1,245.2	\$	1,225.6
3. Amortization Factor		11.272		11.626
4. Pre-SLGRP pooled rate (1. ÷ 2. ÷ 3.)		(1.76%)		(1.76%)
<i>Amounts in millions</i>				

Transition Liability or Surplus Rate

When an employer joins the SLGRP, a transition liability or surplus is calculated to ensure that each employer enters the pool on a comparable basis. The transition liability is maintained separately from the UAL for the SLGRP. The transition liability is amortized over a fixed period, and is expressed as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool. The amortization factor below reflects the weighted average of the amortization periods for all employers.

	December 31, 2012		December 31, 2011	
1. Total transition liability / (surplus)	\$	(779.5)	\$	(789.9)
2. Combined valuation payroll	\$	2,027.8	\$	2,009.9
3. Average Amortization Factor ¹		11.272		11.626
4. Average transition liability/(surplus) rate (1. ÷ 2. ÷ 3.)		(3.41%)		(3.38%)
<i>Amounts in millions</i>				

¹ Weighted average

Multnomah Fire District #10 UAL Rate

The Multnomah Fire District #10 UAL rate is determined by amortizing Multnomah Fire District #10's unfunded accrued liability over the period ending December 31, 2027, and expressing the result as a percentage of combined valuation payroll.

As part of the 2003 Legislation, the Multnomah Fire District #10 UAL was allocated to Tier 1/Tier 2 employers. Multnomah Fire District #10 was allocated \$50,000 of the outstanding UAL, which was fully paid in November, 2003. Of the remaining UAL, City of Portland is allocated 21.8743%, while all Tier 1/Tier 2 employers, including City of Portland, share in the remaining 78.1257%. In addition, four other employers (City of Gresham, City of Fairview, City of Wood Village, and City of Troutdale) are required to pay twice the rate that is determined under item 6.b. below. Thus, the combined valuation payroll for all Tier 1/Tier 2 employers, shown below in item 4.b., includes twice the valuation payroll for those four employers.

	December 31, 2012	December 31, 2011
1. Actuarial accrued liability		
a. Active members	\$ 0.1	\$ 0.5
b. Dormant members	0.8	0.4
c. Retired members and beneficiaries	55.4	58.4
d. Total actuarial accrued liability	\$ 56.4	\$ 59.4
2. Actuarial value of assets		
a. Employer reserve	\$ (143.2)	\$ (135.5)
b. Members reserve	0.4	0.4
c. Benefits in force reserve	32.9	32.1
d. Total actuarial value of assets	\$ (109.8)	\$ (102.9)
3. Multnomah FD #10 UAL	\$ 166.2	\$ 162.3
a. Portion allocated to City of Portland (21.8743% x 3.)	\$ 36.4	\$ 35.5
b. Portion allocated to all T1/T2 employers (78.1257% x 3.)	\$ 129.8	\$ 126.8
4. Combined valuation payroll		
a. City of Portland	\$ 311.7	\$ 303.5
b. All employers	\$ 8,638.0	\$ 8,596.9
5. Amortization factor	11.272	11.626
6. Multnomah FD #10 UAL Rate		
a. City of Portland (3.a. ÷ 4.a. ÷ 5.)	1.03%	1.00%
b. All Tier 1 / Tier 2 employers (3.b. ÷ 4.b. ÷ 5.)	0.13%	0.13%
7. Total Multnomah FD #10 UAL Rate		
a. City of Portland (6.a. + 6.b.)	1.16%	1.13%
b. City of Gresham, City of Fairview, City of Wood Village, City of Troutdale (2 x 6.b.)	0.26%	0.26%
c. All other Tier 1 / Tier 2 employers (6.b.)	0.13%	0.13%
<i>Amounts in millions</i>		

Calculated Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the development of the total Tier 1/Tier 2 contribution rate for each rate pool as of the valuation date. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates are applied to combined valuation payroll. These rates are adjusted on an individual employer basis for side accounts and pre-SLGRP liabilities, if applicable. Weighted average adjustments for side accounts and pre-SLGRP liabilities are shown in the table. For individual employers, these adjustments cannot reduce the pension contribution rate below 0.0%. Note that independent employers, other than the State Judiciary, are subject to a minimum employer contribution rate of 6.0% that is not taken into account in the average rates below.

	SLGRP	School Districts	Independent Employers	Tier 1 / Tier 2 Totals
Tier 1/Tier 2 pension contribution rates				
Employer normal cost rate	13.93%	12.28%	14.33%	13.42%
Member normal cost rate			0.28%	0.03%
UAL rate	7.41%	12.13%	5.60%	8.73%
Multnomah FD #10 rate	0.19%	0.13%	0.14%	0.17%
Total Tier 1/Tier 2 pension rate	21.53%	24.54%	20.35%	22.35%
Average adjustments				
Pre-SLGRP liability/(surplus) rate	(0.77%)	N/A	N/A	(0.45%)
Side account rate	(4.52%)	(9.33%)	(0.92%)	(5.70%)
Total average adjustment	(5.29%)	(9.33%)	(0.92%)	(6.15%)
Net pension contribution rate	16.24%	15.21%	19.43%	16.20%

Calculation of Rate Collar

Employer contribution rates cannot change by more than the greater of 3 percentage points or 20% of the current contribution rate. However, if the funded percentage is below 60% or above 140%, the size of the collar is doubled. If the funded percentage is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale. All collar calculations are performed excluding amounts and contribution rates attributable to pre-SLGRP liabilities, side accounts and member contributions. Retiree medical rates are also excluded from the rate collar calculation.

The table below develops the impact of the collar for each of the Tier 1/Tier 2 rate pools. Although the calculation is performed individually for independent employers, the table shows the calculation as if independent employers were a pool. Note that independent employers, other than the State Judiciary, are subject to a minimum employer contribution rate of 6.0% that is not taken into account in the calculation below.

Advisory July 1, 2015 Rates Calculated as of December 31, 2012				
Calculation of Collar Adjustments	SLGRP	School Districts	Independent Employers	Tier 1 / Tier 2 Totals ¹
1. Current employer contribution rate ²	15.19%	21.55%	14.56%	17.15%
2. Size of rate collar				
a. Preliminary size of rate collar <i>(maximum of 3% or 20% x 1.)</i>	3.04%	4.31%	3.00%	3.43%
b. Funded percentage	83%	80%	87%	82%
c. Size of rate collar (If b. < 60% or b. > 140%, 2 x a. If b. is 70%-130%, a. Otherwise, a graded rate between a. and 2 x a.)	3.04%	4.31%	3.00%	
3. July 1, 2015 Minimum employer contribution rate (1. - 2.c.)	12.15%	17.24%	11.56%	
4. July 1, 2015 Maximum employer contribution rate (1. + 2.c.)	18.23%	25.86%	17.56%	
5. Advisory July 1, 2015 employer contribution rate before collar	21.53%	24.54%	20.07%	
6. Advisory July 1, 2015 employer contribution rate after collar <i>(5., but not less than 3. or more than 4.)</i>	18.23%	24.54%	17.56%	
7. Impact of collar (6. - 5.)³	(3.30%)	0.00%	(2.51%)	(2.17%)

¹ The average Tier 1/Tier 2 rate has been recalculated based on current valuation payroll.

² Current employer contribution rates reflect changes to actual 2013-2015 contributions made by Senate Bill 822.

³ The impact of collar shown for the system-wide column is the weighted average of the impact shown for each rate pool.

Calculated Employer Contribution Rate Summary (Post Rate Collar)

Any adjustment for the collar is made to the UAL rate. The table below summarizes the average rates that would be effective July 1, 2015, by pool and component, if the December 31, 2012 actuarial valuation determined those rates. Although the rate collar is applied individually for independent employers, the table shows the average rates as if independent employers were a pool. Note that independent employers, other than the State Judiciary, are subject to a minimum employer contribution rate of 6.0% that is not taken into account in the average rates below.

Advisory July 1, 2015 Rates Calculated as of December 31, 2012				
	SLGRP	School Districts	Independent Employers	Tier 1 / Tier 2 Totals
Tier 1/Tier 2 pension contribution rates				
Employer normal cost rate	13.93%	12.28%	14.33%	13.42%
Member normal cost rate			0.28%	0.03%
UAL rate	4.11%	12.13%	3.09%	6.56%
Multnomah FD #10 rate	0.19%	0.13%	0.14%	0.17%
Total Tier 1/Tier 2 pension rate	18.23%	24.54%	17.84%	20.18%
Average adjustments				
Pre-SLGRP liability/(surplus) rate	(0.77%)	N/A	N/A	(0.45%)
Side account rate	(4.52%)	(9.33%)	(0.92%)	(5.70%)
Total average adjustment	(5.29%)	(9.33%)	(0.92%)	(6.15%)
Net pension contribution rate	12.94%	15.21%	16.92%	14.03%

OPSRP Assets

Information on OPSRP assets is shown in the section of this report covering the system-wide assets. As of December 31, 2012, the actuarial value of assets for OPSRP is \$1,190.0 million.

OPSRP Liabilities

Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the percent of payroll that would need to be contributed each year to fully fund each member's plan benefits during his or her working career.

A summary of the normal cost by decrement is shown below for the current and prior year.

	December 31, 2012			December 31, 2011		
	General Service	Police & Fire	Total	General Service	Police & Fire	Total
Pre-Retirement Disability						
Duty	\$ 0.5	\$ 0.5	\$ 1.0	\$ 0.5	\$ 0.4	\$ 0.8
Non-Duty	4.6	0.6	5.2	4.9	0.6	5.5
Total Pre-Retirement Disability	\$ 5.0	\$ 1.1	\$ 6.1	\$ 5.4	\$ 1.0	\$ 6.3
Other Benefits						
Service Retirement	\$ 180.6	\$ 35.6	\$ 216.2	\$ 130.4	\$ 22.9	\$ 153.4
Withdrawal	18.2	1.9	20.1	19.2	2.3	21.6
Death	2.2	0.3	2.5	1.9	0.2	2.1
Duty Disability Retirement	0.2	0.3	0.4	0.2	0.2	0.4
Non-Duty Disability Retirement	2.4	0.4	2.7	2.3	0.4	2.6
Total Other Benefits	\$ 203.6	\$ 38.4	\$ 242.0	\$ 154.0	\$ 26.1	\$ 180.1
Assumed Administrative Expenses	\$ 4.9	\$ 0.6	\$ 5.5	\$ 5.9	\$ 0.7	\$ 6.6
Total Normal Cost	\$ 213.5	\$ 40.1	\$ 253.6	\$ 165.3	\$ 27.7	\$ 193.0

Amounts in millions

The increase in the normal cost since the prior valuation is primarily attributable to the changes in actuarial cost method and investment return assumption, plus the effect of new entrants to the OPSRP program. The table below reconciles the normal cost from the prior valuation to the current valuation.

	OPSRP
Normal Cost, December 31, 2011	\$ 193.0
Expected increase	10.2
Assumption and method changes	57.0
Plan changes	(20.1)
New entrants	20.6
Deviations from expected experience	(7.0)
Normal Cost, December 31, 2012	\$ 253.6

Amounts in millions

Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. A summary of the actuarial accrued liability by decrement is shown below for the current and prior year.

	December 31, 2012			December 31, 2011		
	General Service	Police & Fire	Total	General Service	Police & Fire	Total
Active Members						
Pre-retirement Duty Disability	\$ 0.5	\$ 0.8	\$ 1.4	\$ 2.4	\$ 1.8	\$ 4.1
Pre-retirement Non-Duty Disability	34.4	3.5	38.0	24.6	2.9	27.5
Service Retirement	1,304.8	220.2	1,524.9	652.8	112.0	764.8
Withdrawal	91.5	8.4	99.9	98.1	11.6	109.7
Death	15.4	1.9	17.2	9.3	1.0	10.4
Duty Disability Retirement	1.2	1.5	2.7	1.1	1.0	2.1
Non-Duty Disability Retirement	17.8	2.3	20.1	11.4	1.7	13.1
Total Active Members	\$ 1,465.6	\$ 238.6	\$ 1,704.2	\$ 799.7	\$ 132.0	\$ 931.7
Dormant Members			\$ 62.7			\$ 39.5
Retired Members and Beneficiaries			\$ 28.6			\$ 15.2
Total Actuarial Accrued Liability			\$ 1,795.6			\$ 986.4

Amounts in millions

The change in actuarial accrued liability since the last valuation reflects the experience of the system. The table below reconciles the actuarial accrued liability from the last valuation to this valuation. The actuarial accrued liability is expected to increase due to benefits earned during the year and interest, and to decrease due to benefits paid during the year.

	OPSRP
Actuarial Accrued Liability December 31, 2011	\$ 986.4
Expected change	274.5
Assumption and method changes	678.0
Plan changes	(143.2)
Deviations from expected experience	
Retirements from active status	(0.8)
Active mortality and withdrawal	(18.3)
Pay increases	(16.3)
Other	3.8
Total demographic (gains) and losses	(31.6)
New entrants	31.5
Actuarial Accrued Liability December 31, 2012	\$ 1,795.6

Amounts in millions

OPSRP Unfunded Accrued Liability (UAL)

Calculation of UAL

The Unfunded Accrued Liability (UAL) represents the difference between the actuarial accrued liability and the valuation assets. The UAL is amortized over combined valuation payroll. The table below shows the OPSRP UAL, funded status, and UAL as a percentage of combined valuation payroll.

	December 31, 2012		December 31, 2011	
1. Actuarial accrued liability	\$	1,795.6	\$	986.4
2. Actuarial value of assets	\$	1,190.0	\$	840.5
3. Unfunded accrued liability	\$	605.5	\$	145.9
4. Funded percentage (2. ÷ 1.)		66%		85%
5. Combined valuation payroll	\$	8,590.9	\$	8,550.5
6. Unfunded accrued liability as % of combined valuation payroll		7%		2%

Amounts in millions

Reconciliation of UAL Bases

Beginning with the December 31, 2007, actuarial valuation, each odd-year valuation establishes a 16-year closed-period amortization base for outstanding OPSRP UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base will be calculated based on the total OPSRP UAL as of that valuation date less the remaining unamortized balance of any OPSRP UAL bases established at previous odd-year valuation dates. In other words, OPSRP experience from December 31, 2011, to December 31, 2013, will be amortized based on a 16-year amortization schedule established in the December 31, 2013 valuation. This even-year advisory valuation shows both the progress of the amortization bases established in prior valuations and an estimate of the base to be established on December 31, 2013, with the estimate based on experience during 2012. The payment schedules for the unamortized UAL balances as of December 31, 2012, have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

Reconciliation of UAL Bases								
Amortization Base	UAL, December 31, 2011		Payment	Interest	UAL, December 31, 2012		Next Year's Payment	
December 31, 2007	\$	(67.3)	\$	(7.2)	\$	(5.1)	\$	(7.4)
December 31, 2009		156.7		14.9		11.9		15.2
December 31, 2011		56.5		4.9		4.3		5.0
December 31, 2012		N/A		N/A		461.0		39.0
Total	\$	145.9	\$	12.5	\$	11.1	\$	605.5

Amounts in millions

Actuarial Gain or Loss since Prior Valuation

In every actuarial valuation, assumptions are made as to the future experience of the plan and covered group of participants. Whenever there is a difference between the actual experience and that anticipated by the actuarial assumptions, there is a gain or loss to the plan. Gains are the result of experience that is more favorable than anticipated (i.e., serves to reduce the unfunded accrued liability or increase the surplus), while losses are the result of unfavorable experience. The 2012 liability gain is primarily due to favorable demographic experience, offset by new entrants to the OPSRP program.

The table below develops the actuarial gain or loss for OPSRP for the year ending December 31, 2012.

	OPSRP
1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2011	\$ 986.4
b. Normal cost at December 31, 2011 (excluding administrative expenses)	\$ 186.4
c. Benefit payments (excluding administrative expenses) for year ending December 31, 2012	\$ (5.5)
d. Interest	\$ 93.6
e. Expected actuarial accrued liability before changes (a. + b. + c. + d.)	\$ 1,260.9
f. Change in actuarial accrued liability at December 31, 2012, due to assumption and method changes	\$ 678.0
g. Change in actuarial accrued liability at December 31, 2012, due to plan changes	\$ (143.2)
h. Expected actuarial accrued liability at December 31, 2012 (e. + f. + g.)	\$ 1,795.6
2. Actuarial accrued liability at December 31, 2012	\$ 1,795.6
3. Liability gain/(loss) (1.h. - 2)	\$ 0.1
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2011	\$ 840.5
b. Actual contributions for 2012	\$ 209.9
c. Benefit payments and administrative expenses for fiscal year ending December 31, 2012	\$ (10.8)
d. Assumed investment return	\$ 75.2
e. Expected actuarial value of assets at December 31, 2012 (a. + b. + c. + d.)	\$ 1,114.8
5. Actuarial value of assets as of December 31, 2012	\$ 1,190.0
6. Asset gain/(loss) (5. - 4.e.)	\$ 75.2
7. Net actuarial gain/(loss) (3. + 6.)	\$ 75.3
<i>Amounts in millions</i>	

Reconciliation of the UAL

The table below summarizes the changes in UAL since the prior valuation.

	OPSRP
UAL, December 31, 2011	\$ 145.9
Normal Cost (including actual administrative expenses)	191.7
Contributions	(209.9)
Liability (gain) or loss	(0.1)
Asset (gain) or loss	(75.2)
Assumption and method changes	678.0
Plan changes	(143.2)
Interest at 8.0%	18.4
UAL, December 31, 2012	\$ 605.5
<i>Amounts in millions</i>	

OPSRP Contribution Rate Development

Normal Cost Rates

The table below shows the development of the OPSRP normal cost rates.

Development of Normal Cost Rate	December 31, 2012			December 31, 2011		
	General Service	Police & Fire	Total	General Service	Police & Fire	Total
Normal Cost						
Pre-retirement Disability Benefits	\$ 5.0	\$ 1.1	\$ 6.1	\$ 5.4	\$ 1.0	\$ 6.3
All Other Benefits	203.6	38.4	242.0	154.0	26.1	180.1
Assumed Administrative Expenses	4.9	0.6	5.5	5.9	0.7	6.6
Total Normal Cost	\$ 213.5	\$ 40.1	\$ 253.6	\$ 165.3	\$ 27.7	\$ 193.0
OPSRP Valuation Payroll	\$ 2,899.3	\$ 349.9	\$ 3,249.2	\$ 2,634.7	\$ 307.9	\$ 2,942.6
Normal Cost Rate						
Pre-retirement Disability Benefits	0.17%	0.31%	0.19%	0.20%	0.31%	0.21%
All Other Benefits	7.02%	10.99%	7.45%	5.84%	8.47%	6.12%
Assumed Administrative Expenses	0.17%	0.17%	0.17%	0.22%	0.22%	0.22%
Total Normal Cost	7.36%	11.46%	7.81%	6.27%	9.00%	6.56%

Amounts in millions

UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

	December 31, 2012	December 31, 2011
1. Total UAL	\$ 605.5	\$ 145.9
2. Next year's UAL payment	\$ 51.8	\$ 12.5
3. Combined valuation payroll	\$ 8,590.9	\$ 8,550.5
4. UAL rate (2 ÷ 3)	0.60%	0.15%

Amounts in millions

Calculated Employer Contribution Rates (Pre-Rate Collar)

The following table summarizes the OPSRP contribution rate for general service and police & fire members as of the valuation date prior to application of the collar.

The normal cost rates apply to OPSRP payroll only, but the UAL rate is applied to combined valuation payroll. These rates, after the application of the collar, are combined with each employer’s Tier 1/Tier 2 rates (other than Tier 1/Tier 2 normal cost rate) to determine each employer’s contribution rate on OPSRP payroll.

Advisory July 1, 2015 Rates Calculated as of December 31, 2012			
	General Service	Police & Fire	Average Rate
OPSRP pension contribution rates			
Employer normal cost rate	7.36%	11.46%	7.81%
Employer UAL rate	0.60%	0.60%	0.60%
Total OPSRP pension rate	7.96%	12.06%	8.41%

Calculation of Rate Collar

The rate collar restricts the average OPSRP contribution rate so it generally cannot change by more than the greater of 3 percentage points or 20% of the current average OPSRP contribution rate. However, if the funded percentage is below 60% or above 140%, the size of the collar is doubled. If the funded percentage is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale. All collar calculations are performed based on the weighted average OPSRP contribution rate, and any adjustment due to the collar is applied to the OPSRP UAL rate.

The table below shows the calculation of and any adjustment for the rate collar.

Advisory July 1, 2015 Rates Calculated as of December 31, 2012			
	General Service	Police & Fire	Average Rate
1. Current employer contribution rate	6.42%	9.15%	6.71%
2. Size of rate collar			
a. Preliminary size of rate collar (Maximum of 3% or 20% of 1.)			3.00%
b. Funded percentage			66%
c. Size of rate collar (If b. < 60% or b. > 140%, 2 x a.. If b. is 70%-130%, a., otherwise a graded rate between a. and b.)			4.20%
3. July 1, 2015 Minimum contribution rate (1. - 2.c.)			2.51%
4. July 1, 2015 Maximum contribution rate (1. + 2.c.)			10.91%
5. Advisory July 1, 2015 employer contribution rate before collar	7.96%	12.06%	8.41%
6. Advisory July 1, 2015 employer contribution rate after collar	7.96%	12.06%	8.41%
7. Impact of collar (6. - 5.)	0.00%	0.00%	0.00%

Calculated Employer Contribution Rates (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for OPSRP after adjustments for the rate collar.

Advisory July 1, 2015 Rates Calculated as of December 31, 2012			
	General Service	Police & Fire	Average Rate
OPSRP pension contribution rates			
Employer normal cost rate	7.36%	11.46%	7.81%
Employer UAL rate	0.60%	0.60%	0.60%
Total OPSRP pension rate	7.96%	12.06%	8.41%

Retiree Healthcare Valuation

Retiree Healthcare Assets

Assets

A reconciliation of retiree healthcare assets is shown below. The reconciliation of assets is provided by PERS.

	RHIA	RHIPA	Retiree Healthcare Totals
Additions			
1. Employer contributions	\$ 48.1	\$ 3.5	\$ 51.6
2. Net investment income	\$ 35.1	\$ 0.6	\$ 35.6
3. Other	\$ -	\$ -	\$ -
4. Total additions	\$ 83.2	\$ 4.0	\$ 87.2
Deductions			
4. Healthcare Premium Subsidies	\$ (30.4)	\$ (4.0)	(34.3)
5. Administrative expenses	\$ (0.8)	\$ (0.1)	(1.0)
6. Total deductions	\$ (31.2)	\$ (4.1)	(35.3)
7. Net change	\$ 52.0	\$ (0.1)	51.9
8. Net assets held in trust for benefits			
a. Beginning of year	\$ 239.6	\$ 4.5	244.1
b. End of year	\$ 291.6	\$ 4.4	296.0
<i>Amounts in millions.</i>			

Retiree Healthcare Liabilities

Normal Cost

A summary of the normal cost by decrement is shown below for the retiree healthcare benefits.

	RHIA			RHIPA		
	12/31/2012	12/31/2011	Percent Change	12/31/2012	12/31/2011	Percent Change
Normal Cost						
Service Retirement	\$ 3.3	\$ 5.2		\$ 1.3	\$ 1.0	
Withdrawal	0.9	0.4		0.0	0.0	
Duty Disability	0.0	0.0		0.0	0.0	
Nonduty Disability	0.0	0.0		0.0	0.1	
Death	0.1	0.1		0.0	0.0	
Total Normal Cost	\$ 4.4	\$ 5.8	(24.1%)	\$ 1.4	\$ 1.1	23.2%
<i>Amounts in millions</i>						

The table below reconciles the normal cost from the prior valuation to the current valuation.

	RHIA	RHIPA
Normal Cost December 31, 2011	\$5.8	\$1.1
Expected increase	-	-
Assumption and method changes	(1.0)	0.3
Plan changes	-	-
Deviations from expected experience		
Demographic (gains) or losses	(0.4)	(0.0)
Normal Cost December 31, 2012	\$4.4	\$1.4
<i>Amounts in millions</i>		

Actuarial Accrued Liability

A summary of the actuarial accrued liability by status is shown below for the retiree healthcare benefits.

	RHIA			RHIPA		
	12/31/2012	12/31/2011	Percent Change	12/31/2012	12/31/2011	Percent Change
Actives	\$ 105.3	\$ 101.1	4.2%	\$ 45.3	\$ 20.8	117.4%
Dormant Members	28.2	27.5	2.4%	0.0	0.0	0.0%
Retired Members and Beneficiaries	338.3	332.5	1.7%	15.1	13.6	10.7%
Total Actuarial Accrued Liability	\$ 471.8	\$ 461.1	2.3%	\$ 60.3	\$ 34.4	75.2%
<i>Amounts in millions</i>						

The change in actuarial accrued liability since the last valuation reflects the experience of the system. The table below reconciles the actuarial accrued liability from the last valuation to this valuation. The actuarial accrued liability is expected to increase due to benefits earned during the year and interest, and to decrease due to benefits paid during the year. The significant increase in RHIPA actuarial accrued liability between the December 31, 2011 valuation and the December 31, 2012 valuation is due to an increase and restructuring of the participation assumption for future RHIPA-eligible retirees.

	RHIA	RHIPA	Total
Actuarial Accrued Liability December 31, 2011	\$ 461.1	\$ 34.4	\$ 495.5
Expected change	11.5	(0.2)	11.4
Assumption and method changes	8.2	24.8	32.9
Plan changes	-	-	-
Deviations from expected experience			
Demographic (gains) or losses	(9.0)	1.3	(7.7)
Actuarial Accrued Liability December 31, 2012	\$ 471.8	\$ 60.3	\$ 532.2
<i>Amounts in millions</i>			

Retiree Healthcare Unfunded Accrued Liability (UAL)

Calculation of UAL

The Unfunded Accrued Liability (UAL) represents the difference between the actuarial accrued liability and the valuation assets. A summary of the UAL by program is shown on the following table.

	RHIA			RHIPA		
	12/31/2012	12/31/2011	Percent Change	12/31/2012	12/31/2011	Percent Change
1. Actuarial accrued liability	\$ 471.8	\$ 461.1	2.3%	\$ 60.3	\$ 34.4	75.2%
2. Actuarial value of assets	\$ 291.6	\$ 239.6	21.7%	\$ 4.4	\$ 4.5	(2.1%)
3. Unfunded accrued liability	\$ 180.2	\$ 221.5	(18.6%)	\$ 55.9	\$ 29.9	87.0%
4. Funded percentage (2. ÷ 1.)	61.8%	52.0%	18.9%	7.4%	13.2%	(44.1%)
5. Combined valuation payroll	\$ 8,590.9	\$ 8,550.5	0.5%	\$ 2,432.4	\$ 2,376.9	2.3%
6. Unfunded accrued liability as % of combined valuation payroll (3. ÷ 5.)	2.1%	2.6%	(19.0%)	2.3%	1.3%	82.7%
<i>Amounts in millions</i>						

Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each rate-setting valuation establishes a 10-year amortization base for outstanding RHIA and RHIPA UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base will be calculated based on the total UAL as of that valuation date less the remaining unamortized balance of any UAL bases established at previous odd-year valuation dates. In other words, RHIA and RHIPA experience from December 31, 2011, to December 31, 2013, will be amortized based on a 10-year amortization schedule established in the December 31, 2013, valuation. The payment schedules for the unamortized UAL balances as of December 31, 2012, have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

<i>RHIA</i>						
Amortization Base	UAL, December 31, 2011	Payment	Interest	UAL, December 31, 2012	Next Year's Payment	
December 31, 2007	\$ 196.7	\$ 37.5	\$ 14.1	\$ 173.4	\$ 38.7	
December 31, 2009	55.9	8.3	4.1	51.8	8.5	
December 31, 2011	(31.1)	(3.8)	(2.3)	(29.6)	(3.9)	
December 31, 2012	N/A	N/A	N/A	(15.3)	(1.9)	
Total	\$ 221.5	\$ 41.9	\$ 15.9	\$ 180.2	\$ 41.4	
<i>RHIPA</i>						
Amortization Base	UAL, December 31, 2011	Payment	Interest	UAL, December 31, 2012	Next Year's Payment	
December 31, 2007	\$ 13.5	\$ 2.6	\$ 1.0	\$ 11.9	\$ 2.6	
December 31, 2009	1.9	0.3	0.1	1.8	0.3	
December 31, 2011	14.5	1.8	1.1	13.8	1.8	
December 31, 2012	N/A	N/A	N/A	28.4	3.5	
Total	\$ 29.9	\$ 4.6	\$ 2.2	\$ 55.9	\$ 8.2	
<i>Amounts in millions</i>						

Actuarial Gain or Loss since Prior Valuation

In every actuarial valuation, assumptions are made as to the future experience of the plan and covered group of participants. Whenever there is a difference between the actual experience and that anticipated by the actuarial assumptions, there is a gain or loss to the plan. Gains are the result of experience that is more favorable than anticipated (i.e., serves to reduce the unfunded accrued liability or increase the surplus), while losses are the result of unfavorable experience.

The table below shows the development of the actuarial gain (or loss) for RHIA and RHIPA for the plan year ending December 31, 2012.

	RHIA	RHIPA	Retiree Healthcare Totals
Retiree Healthcare			
1. Expected actuarial accrued liability			
a. Actuarial accrued liability at December 31, 2011	\$ 461.1	\$ 34.4	\$ 495.5
b. Normal cost at December 31, 2011	\$ 5.8	\$ 1.1	\$ 6.9
c. Benefit payments for fiscal year ending December 31, 2012	\$ (30.4)	\$ (4.0)	\$ (34.3)
d. Interest	\$ 36.1	\$ 2.7	\$ 38.8
e. Expected actuarial accrued liability before changes (a. + b. + c. + d.)	\$ 472.7	\$ 34.2	\$ 506.9
f. Change in actuarial accrued liability at December 31, 2012, due to assumption and method changes	\$ 8.2	\$ 24.8	\$ 32.9
g. Change in actuarial accrued liability at December 31, 2012, due to plan changes	\$ -	\$ -	\$ -
h. Expected actuarial accrued liability at December 31, 2012 (e. + f. + g.)	\$ 480.8	\$ 59.0	\$ 539.8
2. Actuarial accrued liability at December 31, 2012	\$ 471.8	\$ 60.3	\$ 532.2
3. Liability gain/(loss) (1.h. - 2)	\$ 9.0	\$ (1.3)	\$ 7.7
4. Expected actuarial value of assets			
a. Actuarial value of assets at December 31, 2011	\$ 239.6	\$ 4.5	\$ 244.1
b. Actual contributions for 2012	\$ 48.1	\$ 3.5	\$ 51.6
c. Benefit payments and expenses for fiscal year ending December 31, 2012	\$ (31.2)	\$ (4.1)	\$ (35.3)
d. Assumed investment return	\$ 19.8	\$ 0.3	\$ 20.2
e. Expected actuarial value of assets before changes (a. + b. + c. + d.)	\$ 276.4	\$ 4.2	\$ 280.6
f. Change in actuarial value of assets at December 31, 2012, due to assumption changes	\$ -	\$ -	\$ -
g. Change in actuarial value of assets at December 31, 2012, due to plan changes	\$ -	\$ -	\$ -
h. Expected actuarial value of assets at December 31, 2012 (e. + f. + g.)	\$ 276.4	\$ 4.2	\$ 280.6
5. Actuarial value of assets at December 31, 2012	\$ 291.6	\$ 4.4	\$ 296.0
6. Actuarial asset gain/(loss) (5. - 4.h.)	\$ 15.2	\$ 0.2	\$ 15.5
7. Net actuarial gain/(loss) (3. + 6.)	\$ 24.2	\$ (1.1)	\$ 23.1
<i>Amounts in millions</i>			

Reconciliation of UAL

The table below summarizes the changes in UAL since the prior valuation.

The significant decrease in the RHIA UAL is due to the increase in RHIA contribution rates effective July 1, 2011 combined with better than assumed investment and liability experience during the year. The significant increase in the RHIPA UAL is primarily due to an updated actuarial assumption about the percentage of Tier 1/Tier 2 retired members that will elect to participate in the RHIPA program when eligible at their future retirement dates.

	RHIA	RHIPA
UAL, December 31, 2011	\$ 221.5	\$ 29.9
Normal Cost (including actual administrative expenses)	6.6	1.2
Contributions	(48.1)	(3.5)
Liability (gain) or loss	(9.0)	1.3
Asset (gain) or loss	(15.2)	(0.2)
Assumption and method changes	8.2	24.8
Interest @ 8.0%	16.3	2.3
UAL, December 31, 2012	\$ 180.2	\$ 55.9
<i>Amounts in millions</i>		

Retiree Healthcare Contribution Rate Development

Normal Cost Rate

The table below shows the development of the retiree healthcare normal cost rates. For RHIA, valuation payroll is shown on a system-wide basis. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only.

	RHIA		RHIPA	
	December 31, 2012	December 31, 2011	December 31, 2012	December 31, 2011
Normal Cost	\$ 4.4	\$ 5.8	\$ 1.4	\$ 1.1
Tier 1/Tier 2 Valuation Payroll	\$ 5,341.7	\$ 5,607.9	\$ 1,478.4	\$ 1,539.5
Normal Cost Rate	0.08%	0.10%	0.09%	0.07%
<i>Amounts in millions</i>				

The table below shows the development of the retiree healthcare normal cost rates for the various rate pools. For RHIA, valuation payroll is shown on a system-wide basis. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

	December 31, 2012			
	SLGRP	School Districts	Independent Employers	Retiree Healthcare Total
1. Tier 1/ Tier 2 Valuation Payroll				
a. Total Tier 1/Tier 2 Payroll	\$ 3,043.7	\$ 1,769.0	\$ 529.0	\$ 5,341.7
b. RHIPA Employers' Payroll	\$ 1,457.6	\$ 0.0	\$ 20.9	\$ 1,478.4
2. Normal Cost Rate				
a. RHIA	0.08%	0.08%	0.08%	0.08%
b. RHIPA	0.09%	0.00%	0.09%	0.09%
3. Weighted Average Normal Cost Rate [(1.a. x 2.a + 1.b. x 2.b.) / 1.a]	0.12%	0.08%	0.08%	0.10%
<i>Amounts in millions</i>				

UAL Rate

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only.

	RHIA		RHIPA	
	December 31, 2012	December 31, 2011	December 31, 2012	December 31, 2011
1. Total UAL, December 31, 2012	180.2	221.5	55.9	29.9
2. Next year's UAL payment	41.4	41.9	8.2	4.6
3. Combined valuation payroll	\$ 8,590.9	\$ 8,550.5	\$ 2,432.4	\$ 2,376.9
4. UAL rate (2 ÷ 3)	0.48%	0.49%	0.34%	0.20%
<i>Amounts in millions</i>				

The table below shows the development of the retiree healthcare UAL rates for the various rate pools. For RHIA, combined valuation payroll is shown on a system-wide basis. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

	December 31, 2012			
	SLGRP	School Districts	Independent Employers	Retiree Healthcare Total
1. Combined Valuation Payroll				
a. Tier 1/Tier 2	\$ 5,018.0	\$ 2,731.5	\$ 841.3	\$ 8,590.9
b. RHIPA Employers' Payroll	\$ 2,411.6	\$ 0	\$ 20.9	\$ 2,432.4
2. UAL Rate				
a. RHIA - Reg	0.48%	0.48%	0.48%	0.48%
b. RHIPA - Reg	0.34%	0.00%	0.34%	0.34%
3. Weighted Average UAL Rate [[1.a. x 2.a + 1.b. x 2.b.) / 1.a]	0.64%	0.48%	0.49%	0.58%
<i>Amounts in millions</i>				

Calculated Employer Contribution Rate Summary

The following table summarizes the calculated employer contribution rates for the retiree healthcare programs. The normal cost rates are applied against Tier 1/Tier 2 payroll, but the UAL rates are applied against all payroll. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only.

Advisory July 1, 2015 Rates Calculated as of December 31, 2012			
	State Agencies and Judiciary	All Other Employers	Retiree Healthcare Total
Normal Cost Rates			
RHIA	0.08%	0.08%	0.08%
RHIPA	0.09%	0.00%	0.02%
Total normal cost rate	0.17%	0.08%	0.10%
UAL Rates			
RHIA	0.48%	0.48%	0.48%
RHIPA	0.34%	0.00%	0.10%
Total UAL rate	0.82%	0.48%	0.58%
Total retiree healthcare rate	0.99%	0.56%	0.68%

Accounting / CAFR Exhibits

Accounting/CAFR Exhibits

The following information as of December 31, 2012, has been prepared and provided to Oregon PERS for inclusion in the Actuarial Section of the 2013 Comprehensive Annual Financial Report (CAFR):

- Schedule of Active Member Valuation Data
- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
- Schedules of Funding Progress by Rate Pool
- Solvency Test
- Analysis of Financial Experience

In addition, the Schedules of Funding Progress, the Schedules of Employer Contributions and the Notes to Required Supplementary Schedules are provided for the Financial Section of the CAFR. All data and amounts shown for the December 31, 2005 and later actuarial valuations include both Tier 1/Tier 2 and OPSRP member and employer counts, assets, and liabilities.

This information has been prepared under GASB Statements No. 25, 27, 43, and 45 for purposes of assisting the System and participating employers in fulfilling their financial reporting requirements. **These exhibits do not reflect GASB Statements No. 67 and 68, issued by GASB in June 2012 to replace Statements No. 25 and 27.** GASB 67 governs plan financial reporting effective for fiscal years beginning after June 15, 2013, while GASB 68 governs employer financial reporting for fiscal years beginning after June 15, 2014.

Some employers have made supplemental deposits in addition to their regularly scheduled contributions. These deposits are placed in a side account within the pension trust and used to offset future contribution requirements of that employer. For financial reporting purposes, supplemental deposits are not considered as contributions toward meeting the Annual Required Contribution (ARC) or the contractually required contribution (CRC) for employers in a cost-sharing pool. The Schedule of Funding Progress and Solvency Test also include side accounts as part of the Plan's assets since those amounts are in a restricted trust available exclusively for the benefit of plan members.

Our understanding is the Schedule of Employer Contributions exhibit for 2005 and prior years were prepared by Oregon PERS. Due to the phase-in of the significant contribution rate increases calculated in the December 31, 2003 valuation, the schedule indicates that only a portion of the pension annual required contribution (ARC) was contributed in 2006 and 2007. Effective July 1, 2007, contribution rates were implemented to return pension contributions for the system to the full ARC. During the July 2011 to June 2013 biennium, the percentage of the ARC contribution was less than 100 percent due to the application of the contribution rate stabilization method (rate collar).

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist Oregon PERS in completing its financial statements, but any accounting determination should be reviewed by your auditor.

The exhibits are provided on the following pages.

Actuarial Schedules

Schedule of Active Member Valuation Data

Valuation Date	Count	Annual Payroll (in Thousands)	Average Annual Pay	%Increase in Average Pay	Number of Participating Employers ¹
12/31/1993	137,513	\$ 4,466,797	\$ 32,483	4.9%	N/A
12/31/1995	141,471	\$ 4,848,058	\$ 34,269	2.7%	N/A
12/31/1997	143,194	\$ 5,161,562	\$ 36,045	2.6%	N/A
12/31/1999	151,262	\$ 5,676,606	\$ 37,528	2.0%	N/A
12/31/2000	156,869	\$ 6,195,862	\$ 39,497	5.2%	N/A
12/31/2001	160,477	\$ 6,520,225	\$ 40,630	2.9%	N/A
12/31/2001	160,477	\$ 6,253,965	\$ 38,971	—	N/A
12/31/2002	159,287	\$ 6,383,475	\$ 40,075	2.8%	N/A
12/31/2003	153,723	\$ 6,248,550	\$ 40,648	1.4%	N/A
12/31/2004	142,635	\$ 6,306,447	\$ 44,214	8.8%	806
12/31/2005 ³	156,501	\$ 6,791,891	\$ 43,398	-1.8%	810
12/31/2006	163,261	\$ 7,326,798	\$ 44,878	3.4%	758
12/31/2007	167,023	\$ 7,721,819	\$ 46,232	3.0%	760
12/31/2008	170,569	\$ 8,130,136	\$ 47,665	3.1%	766
12/31/2009	178,606	\$ 8,512,192	\$ 47,659	0.0%	776
12/31/2010	193,569	\$ 8,750,064	\$ 45,204	-5.2%	787
12/31/2011	170,972	\$ 8,550,511	\$ 50,011	10.6%	791
12/31/2012	167,103	\$ 8,590,879	\$ 51,411	2.8%	798

Old Basis
New Basis²

¹ Effective in 2006, participating employers are defined for this purpose as any employer with covered payroll during the prior year. In prior years, employers with liabilities but without covered payroll were included as well.

² Effective in 2001, the Annual Payroll excludes the member pick-up, if any.

³ Effective with the 12/31/2005 valuation, OPSRP members and payroll are included.

Actuarial Schedules

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

Annual Allowances are shown in thousands.

Valuation Date	Added to Rolls		Removed from Rolls		Rolls - End of Year		% Increase in Annual Allowances ¹	Average Annual Allowances
	Count	Annual Allowances	Count	Annual Allowances	Count	Annual Allowances		
12/31/1993					60,841	\$ 564,341	27.6%	\$ 9,276
12/31/1995					64,796	\$ 700,171	24.1%	\$ 10,806
12/31/1997					69,624	\$ 919,038	31.3%	\$ 13,200
12/31/1999					82,819	\$ 1,299,380	41.4%	\$ 15,689
12/31/2000					82,458	\$ 1,385,556	6.6%	\$ 16,803
12/31/2001					85,216	\$ 1,514,491	9.3%	\$ 17,772
12/31/2002					89,482	\$ 1,722,865	13.8%	\$ 19,254
12/31/2003					97,777	\$ 2,040,533	8.4%	\$ 20,869
12/31/2004 ²	6,754	\$ 149,474	2,863	\$ 35,151	101,668	\$ 2,154,856	5.6%	\$ 21,195
12/31/2005 ²	4,472	\$ 149,127	3,217	\$ 36,784	102,923	\$ 2,267,198	5.2%	\$ 22,028
12/31/2006 ²	5,060	\$ 151,240	3,263	\$ 39,735	104,720	\$ 2,378,704	4.9%	\$ 22,715
12/31/2007 ²	5,385	\$ 183,232	3,304	\$ 40,590	106,801	\$ 2,521,345	6.0%	\$ 23,608
12/31/2008 ²	5,963	\$ 171,484	3,626	\$ 47,062	109,138	\$ 2,645,767	4.9%	\$ 24,242
12/31/2009 ²	6,377	\$ 226,713	3,374	\$ 46,228	112,141	\$ 2,826,252	6.8%	\$ 25,203
12/31/2010 ²	6,359	\$ 217,424	3,512	\$ 51,627	114,988	\$ 2,992,048	5.9%	\$ 26,021
12/31/2011 ²	8,715	\$ 282,098	3,679	\$ 55,633	120,024	\$ 3,218,514	7.6%	\$ 26,816
12/31/2012 ²	7,023	\$ 235,917	4,875	\$ 59,353	122,172	\$ 3,395,079	5.5%	\$ 27,789

¹ Since last valuation date.

² Annual allowances reflect estimated adjustments to retiree benefits due to the implementation of the *Strunk v. PERB, et al.* and *City of Eugene v. State of Oregon, PERB, et al.* decisions.

Actuarial Schedules

Schedule of Funding Progress by Rate Pool

The GASB Statement Nos. 25 and 43 liabilities and assets resulting from the last six actuarial valuations are as follows (dollar amounts in millions):

Actuarial Valuation Date	Actuarial Value of Assets ^{1,2} (a)	Actuarial Accrued Liability (AAL) ² (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll ³ (c)	UAAL as a % of Covered Payroll ((b-a)/c)
Tier 1/Tier 2 State & Local Government Rate Pool						
12/31/2007 ⁴	\$ 30,314.8	\$ 26,883.1	\$ (3,431.7)	112.8%	\$ 3,448.1	(99.5%)
12/31/2008	\$ 22,301.2	\$ 27,551.8	\$ 5,250.6	80.9%	\$ 3,452.7	152.1%
12/31/2009 ⁵	\$ 25,068.8	\$ 29,029.1	\$ 3,960.3	86.4%	\$ 3,465.1	114.3%
12/31/2010	\$ 26,499.5	\$ 30,285.0	\$ 3,785.4	87.5%	\$ 3,333.1	113.6%
12/31/2011 ⁶	\$ 25,679.2	\$ 31,109.1	\$ 5,429.9	82.5%	\$ 3,179.3	170.8%
12/31/2012 ⁷	\$ 28,022.3	\$ 30,601.9	\$ 2,579.5	91.6%	\$ 3,043.7	84.7%
Tier 1/Tier 2 School District Rate Pool						
12/31/2007	\$ 24,053.6	\$ 21,299.3	\$ (2,754.3)	112.9%	\$ 2,185.0	(126.1%)
12/31/2008	\$ 17,458.5	\$ 21,742.7	\$ 4,284.2	80.3%	\$ 2,153.7	198.9%
12/31/2009	\$ 19,388.0	\$ 22,517.6	\$ 3,129.6	86.1%	\$ 2,079.2	150.5%
12/31/2009	\$ 20,343.5	\$ 23,303.3	\$ 2,959.8	87.3%	\$ 2,027.5	146.0%
12/31/2011	\$ 19,668.2	\$ 23,973.7	\$ 4,305.5	82.0%	\$ 1,880.7	228.9%
12/31/2012 ⁷	\$ 21,202.1	\$ 22,908.0	\$ 1,705.8	92.6%	\$ 1,769.0	96.4%
Tier 1/Tier 2 Independent Employers and Judiciary						
12/31/2007 ⁴	\$ 4,765.5	\$ 4,423.2	\$ (342.3)	107.7%	\$ 628.8	(54.4%)
12/31/2008	\$ 3,576.7	\$ 4,566.0	\$ 989.3	78.3%	\$ 619.4	159.7%
12/31/2009 ⁵	\$ 3,926.7	\$ 4,665.9	\$ 739.3	84.2%	\$ 579.1	127.7%
12/31/2010	\$ 4,189.4	\$ 4,913.1	\$ 723.7	85.3%	\$ 569.7	127.0%
12/31/2011 ⁶	\$ 4,083.2	\$ 5,069.8	\$ 986.6	80.5%	\$ 547.9	180.1%
12/31/2012 ⁷	\$ 4,479.4	\$ 5,043.4	\$ 564.0	88.8%	\$ 529.0	106.6%
OPSRP Rate Pool						
12/31/2007	\$ 275.1	\$ 203.0	\$ (72.1)	135.5%	\$ 1,459.9	(4.9%)
12/31/2008	\$ 270.5	\$ 336.8	\$ 66.3	80.3%	\$ 1,904.3	3.5%
12/31/2009	\$ 445.4	\$ 535.5	\$ 90.1	83.2%	\$ 2,388.8	3.8%
12/31/2010	\$ 659.0	\$ 767.6	\$ 108.6	85.8%	\$ 2,819.8	3.9%
12/31/2011	\$ 840.5	\$ 986.4	\$ 145.9	85.2%	\$ 2,942.6	5.0%
12/31/2012 ⁷	\$ 1,190.0	\$ 1,795.6	\$ 605.5	66.3%	\$ 3,249.2	18.6%
Postemployment Healthcare Benefits - Retirement Health Insurance Account						
12/31/2007	\$ 250.8	\$ 499.6	\$ 248.8	50.2%	\$ 6,261.9	4.0%
12/31/2008	\$ 183.8	\$ 494.0	\$ 310.2	37.2%	\$ 6,225.8	5.0%
12/31/2009	\$ 214.1	\$ 511.2	\$ 297.1	41.9%	\$ 6,123.4	4.9%
12/31/2010	\$ 232.3	\$ 547.1	\$ 314.8	42.5%	\$ 5,930.3	5.3%
12/31/2011	\$ 239.6	\$ 461.1	\$ 221.5	52.0%	\$ 5,607.9	3.9%
12/31/2012	\$ 291.6	\$ 471.8	\$ 180.2	61.8%	\$ 5,341.7	3.4%
Postemployment Healthcare Benefits - Retiree Health Insurance Premium Account						
12/31/2007	\$ 7.8	\$ 23.3	\$ 15.5	33.6%	\$ 1,692.1	0.9%
12/31/2008	\$ 5.7	\$ 21.3	\$ 15.6	26.7%	\$ 1,708.5	0.9%
12/31/2009	\$ 6.4	\$ 24.5	\$ 18.2	25.9%	\$ 1,705.1	1.1%
12/31/2010	\$ 5.7	\$ 33.9	\$ 28.2	16.8%	\$ 1,603.3	1.8%
12/31/2011	\$ 4.5	\$ 34.4	\$ 29.9	13.2%	\$ 1,539.5	1.9%
12/31/2012	\$ 4.4	\$ 60.3	\$ 55.9	7.4%	\$ 1,478.4	3.8%

Notes:

¹ Side account assets are included with Tier 1/Tier 2 assets.

² Excludes effect of Multnomah Fire District (net UAAL of \$166 million as of 12/31/2012).

³ Covered payroll shown is payroll for members of the rate pool benefiting from the specified program. For example, Tier 1/Tier 2 School District payroll is only payroll for Tier 1/Tier 2 members and excludes OPSRP. However, UAL is amortized using combined Tier 1/Tier 2 and OPSRP

⁴ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2008.

⁵ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2010.

⁶ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2012.

⁷ The 12/31/2012 valuation reflects the benefit changes enacted by the 2013 Oregon Legislature in Senate Bills 822 and 861, as well as a change in cost method to Entry Age Normal.

Actuarial Schedules

Solvency Test

Pension and Retiree Healthcare Plans

(dollar amounts in millions)

The schedule below shows results from the defined benefit pension plans and retiree healthcare plans on a consolidated basis, though GASB 43 does not require solvency tests for retiree healthcare plans. Note that the defined benefit pension plan constitutes over 99% of the consolidated assets and liabilities.

Valuation Date ²	Actuarial Accrued Liability ¹			Valuation Assets ^{1,3}	Portion of Actuarial Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retired Members and Beneficiaries	Other Members		(1)	(2)	(3)
	(1)	(2)	(3)		(1)	(2)	(3)
12/31/1995	\$ 5,753.0	\$ 7,492.8	\$ 10,002.8	\$ 20,957.6	100%	100%	77%
12/31/1997	\$ 8,135.4	\$ 9,994.9	\$ 13,534.6	\$ 29,108.2	100%	100%	81%
12/31/1999	\$ 8,238.1	\$ 14,333.7	\$ 18,336.1	\$ 39,964.8	100%	100%	95%
12/31/2000	\$ 10,142.5	\$ 15,664.1	\$ 17,543.9	\$ 41,804.6	100%	100%	91%
12/31/2001	\$ 10,252.8	\$ 17,465.9	\$ 18,229.0	\$ 39,852.2	100%	100%	67%
12/31/2001 ⁴	\$ 10,252.8	\$ 17,340.0	\$ 10,228.8	\$ 39,852.2	100%	100%	120%
12/31/2002 ⁴	\$ 9,940.7	\$ 19,339.0	\$ 10,240.8	\$ 36,316.8	100%	100%	69%
12/31/2003 ⁴	\$ 9,005.8	\$ 23,625.9	\$ 11,993.9	\$ 42,874.4	100%	100%	85%
12/31/2004 ^{5,6}	\$ 9,073.0	\$ 25,363.0	\$ 13,547.6	\$ 45,735.3	100%	100%	83%
12/31/2005 ^{7,8}	\$ 9,169.7	\$ 26,602.4	\$ 14,044.7	\$ 51,569.6	100%	100%	112%
12/31/2006	\$ 9,410.8	\$ 27,711.3	\$ 14,666.2	\$ 56,844.8	100%	100%	134%
12/31/2007 ⁹	\$ 9,225.0	\$ 29,157.3	\$ 15,011.8	\$ 59,586.4	100%	100%	141%
12/31/2008	\$ 8,341.5	\$ 30,537.7	\$ 15,895.7	\$ 43,710.2	100%	100%	30%
12/31/2009 ¹⁰	\$ 8,392.0	\$ 32,484.2	\$ 16,470.1	\$ 48,949.7	100%	100%	49%
12/31/2010	\$ 8,407.9	\$ 34,432.5	\$ 17,070.2	\$ 51,821.6	100%	100%	53%
12/31/2011 ¹¹	\$ 7,779.7	\$ 37,362.4	\$ 16,551.8	\$ 50,412.4	100%	100%	32%
12/31/2012 ¹²	\$ 7,704.9	\$ 36,759.3	\$ 16,473.1	\$ 55,080.1	100%	100%	64%

¹ Includes effect of Multnomah Fire District (net UAAL of \$166 million as of 12/31/2012).

² An extensive revision of the actuarial assumptions occurs prior to each odd-year valuation; therefore, the figures are not directly comparable. Effective with the 12/31/2006 valuation, revisions to actuarial assumptions occur prior to each even-year valuation.

³ Effective with the 12/31/2002 valuation, includes the value of UAL Lump Sum Side Accounts.

⁴ The 2001 valuation was revised to include the impact of PERS Reform Legislation enacted in 2003. Figures through 12/31/2003 do not reflect the judicial review or subsequent Board action.

⁵ Effective with the 12/31/2004 valuation, the Oregon Supreme Court rulings in *Strunk v. PERB, et al.* (Issued March 8, 2005) and *City of Eugene v. State of Oregon, PERB, et al.* (Issued August 11, 2005) are reflected.

⁶ Effective with the 12/31/2004 valuation, the cost method was changed from Entry Age Normal to Projected Unit Credit, and the actuarial value of assets was changed from a 4-year smoothed value to market value.

⁷ Assets and liabilities for OPSRP are first valued in the 2005 valuation.

⁸ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2006.

⁹ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2008.

¹⁰ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2010.

¹¹ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2012.

¹² The 12/31/2012 valuation reflects the benefit changes enacted by the 2013 Oregon Legislature in Senate Bills 822 and 861.

Actuarial Schedules

Analysis of Financial Experience

The schedule below shows results from the defined benefit pension plans and retiree healthcare plans on a consolidated basis, though GASB 43 does not require an analysis of financial experience for retiree healthcare plans. Note that the defined benefit pension plan constitutes over 99% of the consolidated assets and liabilities.

Gains and Losses in Unfunded Accrued Liability Resulting from Differences Between Assumed Experience and Actual Experience and Assumption Changes

(dollar amounts in millions)

Pension and Retiree Healthcare Plans	\$ Gain (or Loss) for Year	
	2012	2011
Type of Activity		
Retirements from Active Status	\$ 48.2	\$ (68.2)
Active Mortality and Withdrawal	(14.1)	19.1
Pay Increases	157.1	130.7
Contributions	47.0	(37.9)
Interest Crediting Experience	(81.3)	171.9
Investment Income	2,882.7	(2,372.9)
Retirement, Mortality and Lump Sums from Dormant Status	29.2	38.3
Retiree and Beneficiary Mortality	101.5	(110.0)
Data Corrections	-	27.7
COLA Experience	-	54.0
New Entrants	(31.5)	(21.8)
Other	(96.2)	(0.5)
Gain (or Loss) During Year From Financial Experience	\$ 3,042.5	\$ (2,169.6)
Non-Recurring Items		
Assumption Changes	(2,496.6)	-
Plan Changes	5,243.5	-
Composite Gain (or Loss) During Year	\$ 5,789.4	\$ (2,169.6)

GASB Nos. 25 and 43 Required Supplementary Information

Schedules of Funding Progress

(dollar amounts in millions)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
Pension Benefits - Tier 1/Tier 2 and OPSRP¹						
12/31/2003 ²	42,753.3	44,078.1	1,324.8	97.0%	6,248.5	21.2%
12/31/2004 ^{3,4}	45,581.1	47,398.6	1,817.5	96.2%	6,772.4 ⁵	26.8%
12/31/2005 ^{5,6}	51,382.6	49,294.0	(2,088.6)	104.2%	6,791.9	(30.8%)
12/31/2006	56,616.5	51,252.9	(5,363.5)	110.5%	7,326.8	(73.2%)
12/31/2007 ⁷	59,327.8	52,871.2	(6,456.7)	112.2%	7,721.8	(83.6%)
12/31/2008	43,520.6	54,259.5	10,738.9	80.2%	8,130.1	132.1%
12/31/2009 ⁸	48,729.2	56,810.6	8,081.4	85.8%	8,512.2	94.9%
12/31/2010	51,583.6	59,329.5	7,746.0	86.9%	8,750.1	88.5%
12/31/2011 ⁹	50,168.2	61,198.4	11,030.2	82.0%	8,550.5	129.0%
12/31/2012 ¹⁰	54,784.1	60,405.2	5,621.1	90.7%	8,590.9	65.4%
Postemployment Healthcare Benefits - Retirement Health Insurance Account						
12/31/2003 ²	117.1	522.5	405.4	22.4%	6,248.5	6.5%
12/31/2004 ⁴	148.0	556.9	408.9	26.6%	6,772.4 ⁵	6.0%
12/31/2005	181.0	495.9	314.9	36.5%	6,791.9	4.6%
12/31/2006	221.3	511.8	290.5	43.2%	7,326.8	4.0%
12/31/2007	250.8	499.6	248.8	50.2%	7,721.8	3.2%
12/31/2008	183.8	494.0	310.2	37.2%	8,130.1	3.8%
12/31/2009	214.1	511.2	297.1	41.9%	8,512.2	3.5%
12/31/2010	232.3	547.1	314.8	42.5%	8,750.1	3.6%
12/31/2011	239.6	461.1	221.5	52.0%	8,550.5	2.6%
12/31/2012	291.6	471.8	180.2	61.8%	8,590.9	2.1%
Postemployment Healthcare Benefits - Retiree Health Insurance Premium Account						
12/31/2003 ²	4.0	25.0	21.0	16.0%	1,711.9	1.2%
12/31/2004 ⁴	5.2	28.2	23.0	18.4%	1,851.4 ⁵	1.2%
12/31/2005	6.1	27.0	20.9	22.7%	1,827.0	1.1%
12/31/2006	7.0	23.4	16.4	30.0%	1,946.8	0.8%
12/31/2007	7.8	23.3	15.5	33.6%	2,080.2	0.7%
12/31/2008	5.7	21.3	15.6	26.7%	2,217.9	0.7%
12/31/2009	6.4	24.5	18.2	25.9%	2,371.8	0.8%
12/31/2010	5.7	33.9	28.2	16.8%	2,379.7	1.2%
12/31/2011	4.5	34.4	29.9	13.2%	2,376.9	1.3%
12/31/2012	4.4	60.3	55.9	7.4%	2,432.4	2.3%

Notes:

¹ Includes UAAL for Multnomah Fire District (\$166 million as of 12/31/2012)

² The 2001 valuation was revised to include the impact of PERS Reform Legislation enacted in 2003. Figures through 12/31/2003 do not reflect the judicial review or subsequent Board action.

³ Effective with the 2004 valuation, the Oregon Supreme Court rulings in *Strunk v. PERB, et al.* (Issued March 8, 2005) and *City of Eugene v. State of Oregon, PERB, et al.* (Issued August 11, 2005) are reflected.

⁴ Effective with the 2004 valuation, the cost method was changed from Entry Age Normal to Projected Unit Credit, and the actuarial value of assets was changed from a 4-year smoothed value to market value.

⁵ Assets and liabilities for OPSRP are first valued in the 2005 valuation. OPSRP payroll, however, was included in the amortization of the UAAL beginning with the 2004 valuation.

⁶ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2006.

⁷ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2008.

⁸ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2010.

⁹ Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2012.

¹⁰ The 12/31/2012 valuation reflects the benefit changes enacted by the 2013 Oregon Legislature in Senate Bills 822 and 861, as well as a change in cost method to Entry Age Normal.

GASB Nos. 25 and 43 Required Supplementary Information

Schedules of Employer Contributions

(dollar amounts in millions)

Actuarial Valuation Date	Annual Required Contribution ^{1,2,3}	Percentage Contributed
Pension Benefits - Tier 1/Tier 2 and OPSRP		
12/31/2006	\$938.6	63%
12/31/2007	\$805.7	74%
12/31/2008	\$707.4	100% ⁴
12/31/2009	\$630.8	100% ⁴
12/31/2010	\$472.4	100% ⁴
12/31/2011	\$779.1	83% ⁴
12/31/2012	\$1,239.4	72% ⁴
Postemployment Healthcare Benefits - Retirement Health Insurance Account		
12/31/2006	\$44.3	89%
12/31/2007	\$38.8	91%
12/31/2008	\$33.0	85%
12/31/2009	\$29.8	87%
12/31/2010	\$26.5	83%
12/31/2011	\$37.0	88%
12/31/2012	\$47.5	101%
Postemployment Healthcare Benefits - Retiree Health Insurance Premium Account		
12/31/2006	\$2.5	90%
12/31/2007	\$2.7	79%
12/31/2008	\$2.9	63%
12/31/2009	\$2.6	68%
12/31/2010	\$2.3	64%
12/31/2011	\$2.8	83%
12/31/2012	\$3.4	101%

¹ The Annual Required Contribution prior to 7/1/2007 is based on the 7/1/2005 rates developed in the 12/31/2003 Milliman valuation prior to the adjustment to phase-in the rate increase and adjusted for supplemental payments since 12/31/2003. For most employers, the actual pension amount contributed from 7/1/2005 to 6/30/2007 was based on the phased-in rates.

² The Annual Required Contribution shown for 12/31/2010 and prior is an estimated amount based on system-wide contribution rates in effect for the year in question and system payroll as reported by PERS. For example, the 2010 pension benefits ARC is based on rates developed in the 12/31/2007 actuarial valuation and 2010 payroll as reported by PERS.

³ The Annual Required Contribution shown beginning in 12/31/2011 is based on contribution rates in effect for individual employers for the year in question, system payroll as reported by PERS, and contributions rates for individual employers that would have been effective in the absence of the contribution rate stabilization method (rate collar).

⁴ For both the July 2007-June 2009 and July 2009-June 2011 biennia, system employers are generally required to contribute 100% of the Annual Required Contribution for Tier 1/Tier 2 and OPSRP, as a percent of pay. The actual dollar amount contributed in a given calendar year can vary from the estimated Annual Required Contribution based on factors such as month-to-month variations in payroll and timing of contributions. During the July 2011-June 2013 biennium, the percentage of ARC contributed is less than 100% due to the application of the contribution rate stabilization method (rate collar).

GASB Nos. 25 and 43 Required Supplementary Information

Notes to Required Supplementary Schedules

Valuation Date:	December 31, 2012
Actuarial Cost Method:	Entry Age Normal (GASB 67/68 compliant application)
Amortization Method	<p>The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.</p> <p>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.</p> <p>All existing Tier 1/Tier 2 UAL will be re-amortized over 20 years as of the December 31, 2013 rate-setting valuations. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year amortization period.</p>
Equivalent Single Amortization Period:	
Pension	24 years
RHIA	7 years
RHIPA	9 years
<p>The Equivalent Single Amortization Period (ESAP) calculation is performed biennially with each rate-setting actuarial valuation. This was calculated most recently in the December 31, 2011 actuarial valuation and the ESAPs for that valuation are shown above. The ARCs for the July 2009-June 2011 and July 2011-June 2013 biennia were based on the December 31, 2007 and December 31, 2009 valuations, respectively.</p>	
Actuarial Assumptions:	
Investment Rate of Return:	7.75 percent
Payroll Growth:	3.75 percent
Consumer Price Inflation:	2.75 percent
Health Cost Inflation:	Graded from 8.0 percent in 2013 to 4.7 percent in 2083.
Cost-of-Living Adjustments:	1.50% for 2013. In later years, 1.25% on first \$60,000 of annual benefit and 0.15% on benefits over \$60,000.
Method used to Value Assets:	The actuarial value of assets equals the fair market value of assets, excluding the Contingency, Capital Preservation and Rate Guarantee Reserves. The Rate Guarantee Reserve is only excluded from assets when it has a balance greater than zero.

Data Exhibits

This valuation is based upon the membership of the System as of December 31, 2012.

System Wide Data Exhibits

Valuation Pay and Census Exhibit

The following tables illustrate the breakdown of member counts and valuation payroll for the SLGRP, School District Pool, and independent employers.

SLGRP

	General Service	Police & Fire	Total
Tier 1	\$ 1,323.7	\$ 249.8	\$ 1,573.5
Tier 2	1,182.6	287.6	1,470.2
Tier 1/Tier 2 Valuation Payroll	2,506.2	537.5	3,043.7
OPSRP Valuation Payroll	1,700.3	274.0	1,974.3
Combined Valuation Payroll	\$ 4,206.5	\$ 811.5	\$ 5,018.0

Amounts in millions

	December 31					2011
	2012				Total	
	Tier 1	Tier 2	OPSRP	Total		
Active Members in the Pool						
General Service	19,354	20,045	37,170	76,569	77,580	
Police & Fire	3,051	3,987	4,413	11,451	11,383	
Total	22,405	24,032	41,583	88,020	88,963	
Average Age	54.7	48.8	41.6	46.9	46.7	
Average Service	22.5	12.3	4.6	11.3	11.0	
Average prior year Covered Salary	\$ 71,928	\$ 62,213	\$ 44,542	\$ 56,338	\$ 54,907	
Active Members outside the Pool with previous Segments in the Pool						
General Service	4,223	2,596	6,819	7,493	7,493	
Police & Fire	373	343	716	760	760	
Total	4,596	2,939	7,535	8,253	8,253	
Average Age	53.4	45.6	50.3	49.8	49.8	
Average Service in the Pool	2.7	2.2	2.5	2.4	2.4	
Dormant Members¹						
General Service	12,430	8,996	2,856	24,282	23,659	
Police & Fire	761	704	200	1,665	1,697	
Total	13,191	9,700	3,056	25,947	25,356	
Average Age	56.8	50.8	44.5	53.1	52.9	
Average Monthly Benefit	\$ 1,978	\$ 628	\$ 309	\$ 1,277	\$ 1,222	
Retired Members and Beneficiaries¹						
General Service	58,148	4,078	341	62,567	60,334	
Police & Fire	7,941	725	44	8,710	8,373	
Total	66,089	4,803	385	71,277	68,707	
Average Age	70.4	65.3	65.0	70.1	69.8	
Average Monthly Benefit	\$ 2,027	\$ 807	\$ 358	\$ 1,935	\$ 1,889	
Grand Total Number of Members	106,281	41,474	45,024	192,779	191,279	

¹ In these exhibits, Dormants and Retirees are counted by members with service in each rate pool. As a result, individual inactive member with service segments in more than one rate pool will be included in more than one exhibit.

School District Pool

	General Service	Police & Fire	Total
Tier 1	\$ 915.1	\$ 1.4	\$ 916.6
Tier 2	851.1	1.3	852.4
Tier 1/Tier 2 Valuation Payroll	1,766.2	2.7	1,769.0
OPSRP Valuation Payroll	961.4	1.1	962.5
Combined Valuation Payroll	\$ 2,727.6	\$ 3.9	\$ 2,731.5

Amounts in millions

	December 31					2011
	2012				Total	
	Tier 1	Tier 2	OPSRP	Total		
Active Members						
General Service	16,860	18,694	30,124	65,678	68,398	
Police & Fire	23	25	25	73	70	
Total	16,883	18,719	30,149	65,751	68,468	
Average Age	54.4	48.2	42.2	47.0	46.7	
Average Service	21.9	12.0	5.3	11.5	11.0	
Average prior year Covered Salary	\$ 54,909	\$ 45,561	\$ 30,329	\$ 40,977	\$ 39,967	
Active Members outside the Pool with previous Segments in the Pool						
General Service	1,860	1,258		3,118	3,352	
Police & Fire	9	6		15	16	
Total	1,869	1,264		3,133	3,368	
Average Age	54.9	46.8		51.6	51.0	
Average Service	5.0	3.1		4.2	4.1	
Dormant Members¹						
General Service	7,977	7,136	2,309	17,422	16,625	
Police & Fire	19	18	1	38	43	
Total	7,996	7,154	2,310	17,460	16,668	
Average Age	57.6	49.8	45.3	52.8	52.7	
Average Monthly Benefit	\$ 1,565	\$ 500	\$ 240	\$ 953	\$ 926	
Retired Members and Beneficiaries¹						
General Service	57,347	2,426	135	59,908	58,541	
Police & Fire	169	26	1	196	174	
Total	57,516	2,452	136	60,104	58,715	
Average Age	71.5	66.0	65.1	71.2	71.0	
Average Monthly Benefit	\$ 2,095	\$ 761	\$ 332	\$ 2,036	\$ 1,997	
Grand Total Number of Members	84,264	29,589	32,595	146,448	147,219	

¹ In these exhibits, Dormants and Retirees are counted by members with service in each rate pool. As a result, individual inactive member with service segments in more than one rate pool will be included in more than one exhibit.

Independents

	General Service	Police & Fire	Total
Tier 1	\$ 178.6	\$ 88.7	\$ 267.4
Tier 2	173.7	87.9	261.6
Tier 1/Tier 2 Valuation Payroll	352.4	176.6	529.0
OPSRP Valuation Payroll	237.6	74.7	312.4
Combined Valuation Payroll	\$ 590.0	\$ 251.4	\$ 841.3

Amounts in millions

	December 31					2011
	2012				Total	
	Tier 1	Tier 2	OPSRP	Total		
Active Members						
General Service	2,542	2,882	4,913	10,337	10,558	
Police & Fire	946	1,028	1,021	2,995	2,983	
Total	3,488	3,910	5,934	13,332	13,541	
Average Age	53.5	47.4	41.1	46.2	46.0	
Average Service	21.6	12.3	4.7	11.3	11.1	
Average prior year Covered Salary	\$ 78,378	\$ 67,886	\$ 49,129	\$ 62,282	\$ 60,760	
Active Members outside the Pool with previous Segments in the Pool						
General Service	1,359	1,140		2,499	2,613	
Police & Fire	319	303		622	641	
Total	1,678	1,443		3,121	3,254	
Average Age	52.9	45.5		49.5	49.0	
Average Service	4.4	2.9		3.7	3.7	
Dormant Members¹						
General Service	1,675	1,403	385	3,463	3,334	
Police & Fire	243	169	55	467	438	
Total	1,918	1,572	440	3,930	3,772	
Average Age	55.6	50.3	45.6	52.3	52.1	
Average Monthly Benefit	\$ 1,568	\$ 541	\$ 331	\$ 1,019	\$ 957	
Retired Members and Beneficiaries¹						
General Service	8,143	769	55	8,967	8,481	
Police & Fire	2,609	167	6	2,782	2,676	
Total	10,752	936	61	11,749	11,157	
Average Age	69.2	64.9	64.3	68.8	68.6	
Average Monthly Benefit	\$ 2,026	\$ 820	\$ 347	\$ 1,921	\$ 1,891	
Grand Total Number of Members	17,836	7,861	6,435	32,132	31,724	

¹ In these exhibits, Dormants and Retirees are counted by members with service in each rate pool. As a result, individual inactive member with service segments in more than one rate pool will be included in more than one exhibit.

Total

	General Service	Police & Fire	Total
Tier 1	\$ 2,417.4	\$ 340.0	\$ 2,757.4
Tier 2	2,207.4	376.8	2,584.3
Tier 1/Tier 2 Valuation Payroll	4,624.8	716.9	5,341.7
OPSRP Valuation Payroll	2,899.3	349.9	3,249.2
Combined Valuation Payroll	\$ 7,524.1	\$ 1,066.8	\$ 8,590.9

Amounts in millions

	December 31					2011
	2012				Total	
	Tier 1	Tier 2	OPSRP	Total		
Active Members						
General Service	38,756	41,621	72,207	152,584	156,536	
Police & Fire	4,020	5,040	5,459	14,519	14,436	
Total	42,776	46,661	77,666	167,103	170,972	
Average Age	54.4	48.4	41.8	46.9	46.6	
Average Service	22.2	12.2	4.9	11.4	11.0	
Average prior year Covered Salary	\$ 65,737	\$ 56,008	\$ 39,375	\$ 50,768	\$ 49,388	
Dormant Members¹						
General Service	22,082	17,535	5,550	45,167	43,618	
Police & Fire	1,023	891	256	2,170	2,178	
Total	23,105	18,426	5,806	47,337	45,796	
Average Age	57.0	50.3	44.9	52.9	52.8	
Average Monthly Benefit	\$ 1,801	\$ 571	\$ 283	\$ 1,136	\$ 1,092	
Retired Members and Beneficiaries¹						
General Service	123,638	7,273	531	131,442	127,356	
Police & Fire	10,719	918	51	11,688	11,223	
Total	134,357	8,191	582	143,130	138,579	
Average Age	70.8	65.5	64.9	70.4	70.2	
Average Monthly Benefit	\$ 2,056	\$ 795	\$ 351	\$ 1,977	\$ 1,935	
Grand Total Number of Members	200,238	73,278	84,054	357,570	355,347	

¹ In these exhibits, Dormants and Retirees are counted by members with service in each rate pool. As a result, individual inactive member with service segments in more than one rate pool are counted more than once in this exhibit.

Age/Service and Prior Year Covered Payroll by Tier and Job Class

Tier 1 General Service Active Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	3	0	0	0	0	0	3
\$	0	0	0	57,105	0	0	0	0	0	57,105
35-39	1	3	36	210	8	0	0	0	0	258
\$	81,740	35,258	51,494	56,944	71,413	0	0	0	0	56,477
40-44	9	44	217	1,889	440	10	0	0	0	2,609
\$	100,065	36,126	51,401	64,833	63,482	58,598	0	0	0	63,102
45-49	16	53	238	2,358	2,151	493	11	0	0	5,320
\$	88,536	43,319	50,718	65,180	68,901	63,712	70,645	0	0	65,765
50-54	10	59	294	2,738	3,203	2,284	449	11	0	9,048
\$	88,786	54,290	51,813	59,676	64,996	69,974	65,614	58,886	0	64,194
55-59	6	64	247	3,306	4,033	2,472	1,328	173	5	11,634
\$	86,989	46,815	49,563	55,864	63,652	68,638	71,549	66,730	42,951	63,057
60-64	3	40	166	2,203	2,763	1,583	770	245	23	7,796
\$	48,050	57,736	47,208	56,454	60,765	68,355	74,642	72,126	66,925	62,525
65-69	0	13	37	505	654	352	154	69	17	1,801
\$	0	46,089	57,787	56,721	63,710	65,870	76,041	79,963	82,239	63,775
70-74	1	1	11	70	69	30	22	13	12	229
\$	4,914	6,169	50,859	46,071	59,862	53,148	75,092	104,206	84,737	59,144
75+	0	1	4	18	15	9	5	0	6	58
\$	0	65,212	36,723	37,477	52,481	83,759	64,246	0	71,141	54,755
Total	46	278	1,250	13,300	13,336	7,233	2,739	511	63	38,756
\$	86,038	47,376	50,588	59,645	64,193	68,468	71,709	71,888	72,949	63,544

Tier 2 General Service Active Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
25-29	4	64	26	0	0	0	0	0	0	94
\$	42,862	34,970	40,422	0	0	0	0	0	0	36,814
30-34	16	1,013	763	10	0	0	0	0	0	1,802
\$	30,520	48,489	49,583	54,136	0	0	0	0	0	48,824
35-39	30	1,570	4,243	274	0	0	0	0	0	6,117
\$	31,138	51,643	57,174	60,026	0	0	0	0	0	55,755
40-44	19	1,306	4,890	877	0	0	0	0	0	7,092
\$	22,039	52,574	59,420	63,701	0	0	0	0	0	58,588
45-49	14	1,107	4,570	757	0	0	0	0	0	6,448
\$	15,824	50,549	56,357	60,434	0	0	0	0	0	55,750
50-54	11	1,112	5,000	941	0	0	0	0	0	7,064
\$	28,781	46,695	51,190	55,367	0	0	0	0	0	51,004
55-59	9	932	4,902	1,077	0	0	0	0	0	6,920
\$	17,359	47,684	50,828	53,910	0	0	0	0	0	50,841
60-64	23	622	3,056	686	0	0	0	0	0	4,387
\$	35,993	46,406	52,276	52,644	0	0	0	0	0	51,416
65-69	13	218	932	202	0	0	0	0	0	1,365
\$	37,028	52,322	50,807	54,956	0	0	0	0	0	51,532
70-74	2	47	167	36	0	0	0	0	0	252
\$	38,651	31,432	47,276	55,856	0	0	0	0	0	45,478
75+	0	14	58	8	0	0	0	0	0	80
\$	0	21,395	32,594	30,123	0	0	0	0	0	30,387
Total	141	8,005	28,607	4,868	0	0	0	0	0	41,621
\$	29,032	49,403	54,238	57,155	0	0	0	0	0	53,564

Tier 1 Police and Fire Active Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	1	0	0	0	0	0	1
\$	0	0	0	95,603	0	0	0	0	0	95,603
35-39	0	1	6	63	1	0	0	0	0	71
\$	0	38,642	86,208	90,795	150,337	0	0	0	0	90,511
40-44	0	0	19	596	143	1	0	0	0	759
\$	0	0	65,134	88,381	93,565	66,382	0	0	0	88,747
45-49	0	1	11	422	665	96	0	0	0	1,195
\$	0	77,267	89,146	88,245	90,335	94,202	0	0	0	89,886
50-54	0	2	5	218	464	268	53	0	0	1,010
\$	0	37,562	58,448	82,706	86,220	95,912	94,342	0	0	88,226
55-59	0	1	4	124	227	177	87	9	0	629
\$	0	102,814	64,694	76,192	80,238	87,941	88,995	78,352	0	82,729
60-64	0	0	2	62	119	61	33	9	0	286
\$	0	0	56,698	65,125	74,494	80,898	85,431	81,826	0	75,197
65-69	1	0	1	16	27	7	5	1	5	63
\$	4,518	0	45,861	72,468	75,609	69,597	86,970	119,520	107,092	76,640
70-74	0	0	0	0	3	0	1	0	0	4
\$	0	0	0	0	82,462	0	64,755	0	0	78,035
75+	0	0	0	1	0	0	0	1	0	2
\$	0	0	0	76,923	0	0	0	100,921	0	88,922
Total	1	5	48	1,503	1,649	610	179	20	5	4,020
\$	4,518	58,769	71,785	85,484	86,705	91,478	89,729	83,103	107,092	86,881

Tier 2 Police and Fire Active Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
25-29	1	9	0	0	0	0	0	0	0	10
\$	42,065	63,963	0	0	0	0	0	0	0	61,773
30-34	2	135	163	1	0	0	0	0	0	301
\$	62,503	73,772	79,268	104,304	0	0	0	0	0	76,775
35-39	2	199	1,023	99	0	0	0	0	0	1,323
\$	58,363	77,685	80,406	80,599	0	0	0	0	0	79,978
40-44	0	126	1,007	285	0	0	0	0	0	1,418
\$	0	72,648	80,311	82,980	0	0	0	0	0	80,166
45-49	0	73	576	180	0	0	0	0	0	829
\$	0	72,409	75,696	81,540	0	0	0	0	0	76,675
50-54	0	55	369	104	0	0	0	0	0	528
\$	0	63,024	68,786	69,757	0	0	0	0	0	68,377
55-59	0	32	251	71	0	0	0	0	0	354
\$	0	61,501	65,753	67,673	0	0	0	0	0	65,754
60-64	0	30	151	34	0	0	0	0	0	215
\$	0	53,104	64,795	68,218	0	0	0	0	0	63,705
65-69	1	8	42	7	0	0	0	0	0	58
\$	86,396	81,678	68,424	61,479	0	0	0	0	0	69,724
70-74	0	1	0	1	0	0	0	0	0	2
\$	0	17,539	0	69,444	0	0	0	0	0	43,491
75+	0	0	2	0	0	0	0	0	0	2
\$	0	0	11,316	0	0	0	0	0	0	11,316
Total	6	668	3,584	782	0	0	0	0	0	5,040
\$	61,699	72,054	76,511	78,374	0	0	0	0	0	76,192



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All Tier 1/Tier 2 Active Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
25-29	5	73	26	0	0	0	0	0	0	104
\$	42,702	38,544	40,422	0	0	0	0	0	0	39,214
30-34	18	1,148	926	15	0	0	0	0	0	2,107
\$	34,074	51,462	54,808	60,839	0	0	0	0	0	52,851
35-39	33	1,773	5,308	646	9	0	0	0	0	7,769
\$	34,321	54,531	61,646	65,178	80,183	0	0	0	0	60,221
40-44	28	1,476	6,133	3,647	583	11	0	0	0	11,878
\$	47,119	53,797	62,584	69,827	70,861	59,306	0	0	0	64,083
45-49	30	1,234	5,395	3,717	2,816	589	11	0	0	13,792
\$	54,604	51,554	58,240	67,624	73,963	68,682	70,645	0	0	63,829
50-54	21	1,228	5,668	4,001	3,667	2,552	502	11	0	17,650
\$	57,355	47,776	52,374	60,179	67,682	72,698	68,647	58,886	0	60,415
55-59	15	1,029	5,404	4,578	4,260	2,649	1,415	182	5	19,537
\$	45,211	48,114	51,474	56,138	64,536	69,928	72,621	67,305	42,951	59,412
60-64	26	692	3,375	2,985	2,882	1,644	803	254	23	12,684
\$	37,384	47,351	52,590	55,892	61,332	68,820	75,086	72,470	66,925	58,988
65-69	15	239	1,012	730	681	359	159	70	22	3,287
\$	38,151	52,966	51,789	56,623	64,181	65,942	76,385	80,528	87,888	59,042
70-74	3	49	178	107	72	30	23	13	12	487
\$	27,406	30,633	47,497	49,581	60,803	53,148	74,643	104,206	84,737	52,163
75+	0	15	64	27	15	9	5	1	6	142
\$	0	24,317	32,187	36,759	52,481	83,759	64,246	100,921	71,141	40,896
Total	194	8,956	33,489	20,453	14,985	7,843	2,918	531	68	89,437
\$	43,433	51,035	56,511	61,667	66,670	70,258	72,815	72,311	75,459	60,661

Age/Service and Prior Year Covered Payroll by Rate Pool

Tier 1/Tier 2 SLGRP Active Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
25-29	3	44	18	0	0	0	0	0	0	65
\$	45,908	43,800	47,581	0	0	0	0	0	0	44,944
30-34	8	472	563	12	0	0	0	0	0	1,055
\$	38,242	52,872	56,239	59,502	0	0	0	0	0	54,633
35-39	18	749	2,493	429	5	0	0	0	0	3,694
\$	36,924	57,180	63,957	67,214	80,818	0	0	0	0	62,852
40-44	9	680	3,193	1,880	398	7	0	0	0	6,167
\$	15,161	61,382	65,636	72,433	71,956	56,222	0	0	0	67,562
45-49	6	592	2,801	2,014	1,512	372	10	0	0	7,307
\$	10,010	58,932	65,079	70,816	76,268	69,497	73,543	0	0	68,669
50-54	6	555	2,775	2,019	1,942	1,181	313	9	0	8,800
\$	35,564	56,085	61,726	69,355	72,377	75,143	70,402	59,711	0	67,560
55-59	7	526	2,725	2,138	2,218	1,474	668	131	1	9,888
\$	20,105	55,785	61,249	66,699	73,142	74,534	74,754	68,545	53,502	67,764
60-64	18	390	1,843	1,536	1,557	1,012	481	152	13	7,002
\$	39,964	52,006	60,609	64,878	70,071	76,172	82,092	74,460	62,553	67,147
65-69	11	151	620	438	433	230	108	48	14	2,053
\$	47,773	60,342	58,458	63,994	72,091	75,240	87,935	82,936	89,423	66,810
70-74	1	29	103	65	52	22	16	10	11	309
\$	7,679	34,961	56,314	60,248	67,873	58,894	86,720	118,373	80,667	61,559
75+	0	9	47	15	9	6	4	1	6	97
\$	0	28,119	35,061	43,434	68,179	98,485	70,555	100,921	71,141	47,082
Total	87	4,197	17,181	10,546	8,126	4,304	1,600	351	45	46,437
\$	33,465	56,581	62,710	68,578	72,804	74,612	77,100	74,359	76,284	66,900



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Tier 1/Tier 2 School District Active Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
25-29	0	21	7	0	0	0	0	0	0	28
\$	0	23,950	22,295	0	0	0	0	0	0	23,537
30-34	8	583	244	1	0	0	0	0	0	836
\$	20,689	47,416	44,437	43,343	0	0	0	0	0	46,286
35-39	12	880	2,300	133	1	0	0	0	0	3,326
\$	21,618	49,655	55,931	51,217	55,504	0	0	0	0	53,958
40-44	10	674	2,353	1,394	109	1	0	0	0	4,541
\$	24,567	44,083	55,578	62,744	59,118	44,060	0	0	0	56,086
45-49	9	554	2,111	1,357	1,025	144	1	0	0	5,201
\$	18,137	41,630	46,310	59,289	67,212	59,403	41,669	0	0	53,630
50-54	6	579	2,491	1,714	1,417	1,187	150	1	0	7,545
\$	9,420	36,711	40,116	47,476	58,277	67,906	61,936	68,587	0	49,723
55-59	3	423	2,296	2,108	1,732	968	647	39	3	8,219
\$	12,697	35,956	38,151	43,531	51,923	61,322	68,510	65,020	29,860	47,554
60-64	3	252	1,269	1,215	1,106	529	275	87	7	4,743
\$	10,575	36,465	39,445	42,460	47,942	53,375	61,613	67,012	67,461	45,408
65-69	3	66	310	234	206	106	41	17	5	988
\$	14,083	31,250	36,694	40,442	46,579	45,519	46,829	67,631	81,242	41,336
70-74	1	15	57	36	14	8	5	2	1	139
\$	69,623	20,659	29,706	30,087	30,818	37,346	40,018	24,232	129,505	30,678
75+	0	6	10	12	5	2	1	0	0	36
\$	0	18,613	23,669	28,415	24,379	66,350	39,012	0	0	27,305
Total	55	4,053	13,448	8,204	5,615	2,945	1,120	146	16	35,602
\$	19,492	42,624	46,034	50,023	55,400	61,818	64,965	65,976	68,595	49,994

Tier 1/Tier 2 Independent Employers Active Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
25-29	2	8	1	0	0	0	0	0	0	11
\$	37,894	47,945	38,447	0	0	0	0	0	0	45,254
30-34	2	93	119	2	0	0	0	0	0	216
\$	70,941	69,670	69,305	77,609	0	0	0	0	0	69,554
35-39	3	144	515	84	3	0	0	0	0	749
\$	69,516	70,554	75,984	76,882	87,351	0	0	0	0	75,060
40-44	9	122	587	373	76	3	0	0	0	1,170
\$	104,133	65,187	74,066	83,163	81,969	71,582	0	0	0	76,779
45-49	15	88	483	346	279	73	0	0	0	1,284
\$	94,321	64,393	70,713	81,734	86,272	82,830	0	0	0	77,595
50-54	9	94	402	268	308	184	39	1	0	1,305
\$	103,839	66,877	63,777	72,301	81,343	87,920	80,371	41,757	0	74,056
55-59	5	80	383	332	310	207	100	12	1	1,430
\$	99,866	61,958	61,796	68,182	73,432	77,374	84,978	61,193	71,673	69,821
60-64	5	50	263	234	219	103	47	15	3	939
\$	44,183	65,903	59,818	66,652	66,819	75,914	82,217	83,965	84,621	66,746
65-69	1	22	82	58	42	23	10	5	3	246
\$	4,518	67,483	58,432	66,243	68,975	67,090	72,824	101,256	91,801	65,336
70-74	1	5	18	6	6	0	2	1	0	39
\$	4,914	35,448	53,384	50,995	69,498	0	64,594	122,481	0	54,300
75+	0	0	7	0	1	1	0	0	0	9
\$	0	0	25,061	0	51,708	30,218	0	0	0	28,595
Total	52	706	2,860	1,703	1,244	594	198	34	7	7,398
\$	85,432	66,349	68,537	74,968	77,474	80,551	82,595	78,362	85,848	72,833



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OPSRP Active General Service Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	90	0	0	0	0	0	0	0	0	90
\$	7,705	0	0	0	0	0	0	0	0	7,705
20-24	1,595	88	0	0	0	0	0	0	0	1,683
\$	19,399	21,836	0	0	0	0	0	0	0	19,526
25-29	6,220	1,926	0	0	0	0	0	0	0	8,146
\$	30,952	35,742	0	0	0	0	0	0	0	32,085
30-34	6,418	6,449	0	0	0	0	0	0	0	12,867
\$	36,455	42,606	0	0	0	0	0	0	0	39,538
35-39	5,283	5,422	0	0	0	0	0	0	0	10,705
\$	38,328	45,308	0	0	0	0	0	0	0	41,863
40-44	4,723	5,166	0	0	0	0	0	0	0	9,889
\$	36,947	44,318	0	0	0	0	0	0	0	40,797
45-49	3,777	4,743	0	0	0	0	0	0	0	8,520
\$	35,185	40,507	0	0	0	0	0	0	0	38,148
50-54	3,304	4,477	0	0	0	0	0	0	0	7,781
\$	36,066	39,125	0	0	0	0	0	0	0	37,826
55-59	2,732	3,710	0	0	0	0	0	0	0	6,442
\$	36,341	39,258	0	0	0	0	0	0	0	38,021
60-64	1,740	2,410	0	0	0	0	0	0	0	4,150
\$	34,797	40,313	0	0	0	0	0	0	0	38,000
65-69	572	925	0	0	0	0	0	0	0	1,497
\$	31,656	34,558	0	0	0	0	0	0	0	33,449
70-74	123	202	0	0	0	0	0	0	0	325
\$	22,327	23,593	0	0	0	0	0	0	0	23,114
75+	29	83	0	0	0	0	0	0	0	112
\$	17,670	17,265	0	0	0	0	0	0	0	17,370
Total	36,606	35,601	0	0	0	0	0	0	0	72,207
\$	34,649	41,246	0	0	0	0	0	0	0	37,901

OPSRP Active Police and Fire Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	0	0	0	0	0	0	0	0	0	0
\$	0	0	0	0	0	0	0	0	0	0
20-24	97	5	0	0	0	0	0	0	0	102
\$	47,230	45,195	0	0	0	0	0	0	0	47,130
25-29	713	299	0	0	0	0	0	0	0	1,012
\$	53,941	62,165	0	0	0	0	0	0	0	56,371
30-34	650	883	0	0	0	0	0	0	0	1,533
\$	57,335	65,943	0	0	0	0	0	0	0	62,293
35-39	406	632	0	0	0	0	0	0	0	1,038
\$	55,564	64,894	0	0	0	0	0	0	0	61,244
40-44	308	395	0	0	0	0	0	0	0	703
\$	52,933	63,531	0	0	0	0	0	0	0	58,888
45-49	169	227	0	0	0	0	0	0	0	396
\$	52,699	58,852	0	0	0	0	0	0	0	56,226
50-54	92	179	0	0	0	0	0	0	0	271
\$	58,616	52,048	0	0	0	0	0	0	0	54,278
55-59	99	124	0	0	0	0	0	0	0	223
\$	56,809	55,842	0	0	0	0	0	0	0	56,271
60-64	43	90	0	0	0	0	0	0	0	133
\$	57,440	50,007	0	0	0	0	0	0	0	52,410
65-69	12	25	0	0	0	0	0	0	0	37
\$	61,509	49,189	0	0	0	0	0	0	0	53,185
70-74	0	7	0	0	0	0	0	0	0	7
\$	0	36,559	0	0	0	0	0	0	0	36,559
75+	1	3	0	0	0	0	0	0	0	4
\$	89,764	78,162	0	0	0	0	0	0	0	81,063
Total	2,590	2,869	0	0	0	0	0	0	0	5,459
\$	54,978	62,380	0	0	0	0	0	0	0	58,868



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All OPSRP Active Members

	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<20	90	0	0	0	0	0	0	0	0	90
\$	7,705	0	0	0	0	0	0	0	0	7,705
20-24	1,692	93	0	0	0	0	0	0	0	1,785
\$	20,994	23,092	0	0	0	0	0	0	0	21,104
25-29	6,933	2,225	0	0	0	0	0	0	0	9,158
\$	33,316	39,293	0	0	0	0	0	0	0	34,768
30-34	7,068	7,332	0	0	0	0	0	0	0	14,400
\$	38,376	45,417	0	0	0	0	0	0	0	41,961
35-39	5,689	6,054	0	0	0	0	0	0	0	11,743
\$	39,558	47,353	0	0	0	0	0	0	0	43,577
40-44	5,031	5,561	0	0	0	0	0	0	0	10,592
\$	37,925	45,682	0	0	0	0	0	0	0	41,998
45-49	3,946	4,970	0	0	0	0	0	0	0	8,916
\$	35,935	41,345	0	0	0	0	0	0	0	38,951
50-54	3,396	4,656	0	0	0	0	0	0	0	8,052
\$	36,677	39,622	0	0	0	0	0	0	0	38,380
55-59	2,831	3,834	0	0	0	0	0	0	0	6,665
\$	37,057	39,794	0	0	0	0	0	0	0	38,631
60-64	1,783	2,500	0	0	0	0	0	0	0	4,283
\$	35,343	40,662	0	0	0	0	0	0	0	38,448
65-69	584	950	0	0	0	0	0	0	0	1,534
\$	32,270	34,943	0	0	0	0	0	0	0	33,925
70-74	123	209	0	0	0	0	0	0	0	332
\$	22,327	24,027	0	0	0	0	0	0	0	23,398
75+	30	86	0	0	0	0	0	0	0	116
\$	20,073	19,389	0	0	0	0	0	0	0	19,566
Total	39,196	38,470	0	0	0	0	0	0	0	77,666
\$	35,992	42,822	0	0	0	0	0	0	0	39,375

Inactive Member Data Exhibits

For the following exhibits, inactive members are counted by lives, not by segments.

Total Tier 1/Tier 2

Dormant Members		
	Count	Average Deferred Monthly Benefit
<20	0	\$ 0
20-24	0	0
25-29	88	232
30-34	776	577
35-39	2,539	1,015
40-44	3,779	1,336
45-49	4,244	1,554
50-54	6,073	1,665
55-59	7,811	1,608
60-64	6,117	1,493
65-69	2,648	1,340
70-74	917	1,036
75+	1,073	1,065
Total	36,065	\$ 1,445

Retirees and Beneficiaries		
	Count	Average Monthly Benefit
<45	530	\$ 1,298
45-49	356	1,761
50-54	1,292	2,512
55-59	7,677	3,016
60-64	22,731	2,828
65-69	28,669	2,614
70-74	21,650	2,364
75-79	15,010	2,051
80-84	10,886	1,723
85-89	7,779	1,336
90-94	3,741	1,004
95-99	993	796
100+	141	777
Total	121,455	\$ 2,328

OPSRP

Dormant Members		
	Count	Average Deferred Monthly Benefit
<20	0	\$ 0
20-24	21	102
25-29	345	206
30-34	1,107	288
35-39	869	322
40-44	798	325
45-49	652	321
50-54	646	298
55-59	530	304
60-64	340	290
65-69	318	122
70-74	165	67
75+	15	144
Total	5,806	\$ 283

Retirees and Beneficiaries		
	Count	Average Monthly Benefit
<45	1	\$ 1,573
45-49	1	1,206
50-54	3	286
55-59	62	179
60-64	171	332
65-69	284	386
70-74	53	371
75-79	6	489
80-84	1	309
85-89	0	0
90-94	0	0
95-99	0	0
100+	0	0
Total	582	\$ 351

System-Wide Totals

Dormant Members		
	Count	Average Deferred Monthly Benefit
<20	0	\$ 0
20-24	21	102
25-29	433	211
30-34	1,883	407
35-39	3,408	838
40-44	4,577	1,160
45-49	4,896	1,389
50-54	6,719	1,533
55-59	8,341	1,525
60-64	6,457	1,430
65-69	2,966	1,210
70-74	1,082	889
75+	1,088	1,052
Total	41,871	\$ 1,284

Retirees and Beneficiaries		
	Count	Average Monthly Benefit
<45	531	\$ 1,299
45-49	357	1,760
50-54	1,295	2,507
55-59	7,739	2,994
60-64	22,902	2,810
65-69	28,953	2,592
70-74	21,703	2,359
75-79	15,016	2,051
80-84	10,887	1,723
85-89	7,779	1,336
90-94	3,741	1,004
95-99	993	796
100+	141	777
Total	122,037	\$ 2,318

Retiree Healthcare Member Data Exhibits

For the following exhibits, inactive members are counted by lives, not by pool or employer segments.

RHIA Members

	As of December 31, 2012	As of December 31, 2011
Dormant members		
Number	16,260	15,948
Average Age	53.2	52.8
Retired members under age 65 eligible for deferred RHIA benefits		
Number	29,007	30,231
Average Age	60.3	60.2
Retired members receiving RHIA benefits		
Number	42,995	42,163
Average Age	75.9	75.8

RHIPA Members

	As of December 31, 2012	As of December 31, 2011
Active Tier 1/Tier 2 employees of RHIPA employers		
Number	24,115	25,804
Average Age	52.0	51.5
Average Service	17.6	16.8
Retired members receiving RHIPA benefits		
Number	1,148	1,096
Average Age	61.2	61.3
Average Monthly Subsidy Amount	292	284

Actuarial Methods and Assumptions

Tier 1/Tier 2 (including Retiree Healthcare)

Actuarial Methods and Valuation Procedures

In September 2013 the Board adopted the following actuarial methods and valuation procedures for the December 31, 2012 and 2013 actuarial valuations of PERS Tier 1/Tier 2 benefits.

<i>Actuarial cost method</i>	<p>Entry Age Normal. Under the Entry Age Normal (EAN) cost method, each active member's entry age present value of projected benefits is allocated over the member's service from their date of entry until their assumed date of exit, taking into consideration expected future compensation increases. Thus, the total pension to which each member is expected to become entitled at retirement is broken down into units, each associated with a year of past or projected future credited service. Typically, when this method is introduced, there will be an initial liability for benefits credited for service prior to that date, and to the extent that the liability is not covered by assets of the plan, there is an unfunded accrued liability to be funded over a stipulated period in accordance with an amortization schedule.</p> <p>A detailed description of the calculation follows:</p> <ul style="list-style-type: none"> • An individual member's entry age present value of projected benefits is the sum of the present value of the benefit described under the plan at each possible separation date, determined at the member's entry age using the projected compensation and service at each separation date. • An individual member's entry age present value of projected salaries is the sum of the present value of the projected compensation over the member's working career associated with each possible future separation date, determined at the member's entry age. • An individual member's present value of projected benefits is the sum of the present value of the benefit described under the plan at each possible separation date, determined at the valuation date using the projected compensation and service at each separation date. • An individual member's normal cost for a certain year is the member's entry age present value of projected benefits divided by the member's entry age present value of projected salaries and multiplied by the member's projected compensation for the year following the valuation date. • An individual member's actuarial accrued liability is the member's present value of projected benefits less the sum of the present value of the member's normal costs for each future year, determined at the valuation date using the projected compensation and service at each future year. <ul style="list-style-type: none"> – The plan's normal cost is the sum of the individual member normal costs, and the plan's actuarial accrued liability is the sum of the individual member accrued liabilities.
<i>Tier 1/Tier 2 UAL amortization</i>	<p>The Tier 1/Tier 2 UAL amortization period will be reset at 20 years as of December 31, 2013. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll (Tier 1/ Tier 2 plus OPSRP payroll) over a closed 20 year period from the valuation in which they are first recognized.</p>

<i>Retiree Healthcare UAL amortization</i>	The UAL for Retiree Health Care as of December 31, 2007 is amortized as a level percentage of combined valuation payroll over a closed 10 year period. Gains and losses between subsequent odd-year valuations are amortized as a level percentage of combined valuation payroll (Tier 1/ Tier 2 plus OPSRP payroll) over a closed 10 year period from the valuation in which they are first recognized.
<i>Asset valuation method</i>	The actuarial value of assets equals the market value of assets, excluding the Contingency and Capital Preservation Reserves, and the Rate Guarantee Reserve when it is in positive surplus status. Market values are reported to Milliman by PERS. It is our understanding that select real estate and private equity investments are reported on a three-month lag basis. This valuation report does not attempt to quantify any effects of the reporting lag.
<i>Contribution rate stabilization method</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) are confined to a collar based on the prior contribution rate (prior to application of side accounts, pre-SLGRP liabilities, and 6 percent Independent Employer minimum). The new contribution rate will generally not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the prior contribution rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funded percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.
<i>Allocation of Liability for Service Segments</i>	For active Tier 1/Tier 2 members who have worked for multiple PERS employers over their career, the calculated actuarial accrued liability is allocated among the employers based on a weighted average of the Money Match methodology, which uses account balance, and the Full Formula methodology, which uses service. The allocation is 30% (5% for police & fire) based on account balance with each employer and 70% (95% for police & fire) based on service with each employer. The entire normal cost is allocated to the current employer.
<i>Allocation of Benefits-In-Force (BIF) Reserve</i>	The BIF reserve is allocated to each rate pool in proportion to the retiree liability attributable to the rate pool.

Economic Assumptions

The Board adopted the following economic assumptions for the December 31, 2012 and 2013 actuarial valuations. The investment return assumption, health care cost inflation assumption, and interest crediting for account balances was first adopted in 2013. All other economic assumptions were first adopted in 2005.

<i>Investment return</i>	7.75% compounded annually
<i>Pre-2014 Interest crediting</i>	8.00% compounded annually on members' regular account balances 8.25% compounded annually on members' variable account balances
<i>Post-2013 Interest crediting</i>	7.75% compounded annually on members' regular account balances 7.75% compounded annually on members' variable account balances
<i>Inflation</i>	2.75% compounded annually
<i>Payroll growth</i>	3.75% compounded annually. This assumption represents the sum of the inflation assumption and a real wage growth assumption of 100 basis points.
<i>Healthcare cost trend</i>	Health cost trend rates are used to predict increases in the RHIPA Maximum Subsidy. These rates include consideration of the excise tax that will be introduced in 2018 by the Patient Protection and Affordable Care Act.

Year ¹	Rate	Year	Rate
2013	8.0%	2036	6.2%
2014	6.1	2037	6.1
2015	5.9	2038 – 2039	6.0
2016	5.5	2040 – 2041	5.9
2017	6.2	2042 – 2043	5.8
2018	5.9	2044 – 2047	5.7
2019	5.8	2048 – 2052	5.6
2020	5.9	2053 – 2060	5.5
2021 – 2022	6.0	2061 – 2065	5.4
2023	6.5	2066 – 2072	5.3
2024 – 2025	6.9	2073 – 2074	5.2
2026	6.8	2075 – 2076	5.1
2027 – 2029	6.7	2077 – 2078	5.0
2030 – 2031	6.6	2079 – 2080	4.9
2032 – 2033	6.5	2081 – 2082	4.8
2034 – 2035	6.4	2083+	4.7

¹ For valuation purposes, the health cost trend rates are assumed to be applied at the beginning of the plan year.

Demographic Assumptions

The Board adopted the following demographic assumptions for the December 31, 2012 and 2013 actuarial valuations.

Mortality

Healthy Retired Members

The following healthy retired mortality tables were first adopted in the December 31, 2010 valuation, except for the School District male and Police and Fire male table which were adopted in the December 31, 2012 valuation.

Basic Table	RP 2000, Generational Combined Active/Healthy Annuitant, Sex Distinct
School District male	No collar, set back 24 months
Other General Service male (including male beneficiary)	Blended 25% blue collar / 75% white collar, set back 12 months
Police & Fire male	Blended 25% blue collar / 75% white collar, set back 12 months
School District female	White collar, set back 24 months
Other female (including female beneficiary)	White collar, no set back

Disabled Retired Members

The following disabled retiree mortality rates were first adopted for the December 31, 2012 actuarial valuation.

Basic Table	RP 2000, Static, Combined Disabled, No Collar, Sex Distinct
Male	65% of Disabled table
Female	90% of Disabled table

Non-Annuitant Members

The following mortality rates were first adopted for non-annuitant members for the December 31, 2012 actuarial valuation, except for the Other General Service male and School District female rates which were adopted in the December 31, 2010 valuation.

Basic Table	Percent of Healthy Retired Mortality Tables
School District male	70%
Other General Service male	85%
Police & Fire male	95%
School District female	60%
Other female	55%

Retirement Assumptions

The retirement assumptions used in the actuarial valuation include the following:

- Retirement from active status/dormant status
- Probability a member will elect a lump sum option at retirement
- Percentage of members who elect to purchase credited service at retirement.

Rates of Retirement from Active Status

The following retirement rate assumptions were first adopted in the December 31, 2012 valuation.

Age	Police & Fire			General Service		School Districts		General Service (Including School Districts)	Judges
	< 13 yrs	13-24 yrs	25+ yrs	<15 yrs	15-29 yrs	<15 yrs	15-29 yrs	30+ yrs	
Less than 50								15.00%	
50	1.00%	1.50%	20.00%					15.00%	
51	1.00%	1.50%	14.00%					15.00%	
52	1.00%	1.50%	14.00%					22.00%	
53	1.00%	1.50%	14.00%					22.00%	
54	1.00%	1.50%	14.00%					22.00%	
55	2.00%	7.00%	20.00%	1.00%	2.50%	1.00%	4.00%	22.00%	
56	2.00%	7.00%	20.00%	1.00%	2.50%	1.00%	4.00%	22.00%	
57	2.00%	7.00%	20.00%	1.00%	2.50%	1.00%	4.00%	22.00%	
58	2.00%	7.00%	20.00%	1.00%	8.00%	2.50%	13.00%	26.00%	
59	2.00%	7.00%	20.00%	1.50%	8.00%	2.50%	12.00%	21.00%	
60	5.00%	10.00%	20.00%	4.00%	8.00%	3.50%	12.00%	21.00%	10.00%
61	2.00%	13.00%	20.00%	4.00%	8.00%	5.50%	12.00%	21.00%	10.00%
62	15.00%	20.00%	35.00%	8.50%	16.00%	10.00%	22.00%	29.00%	10.00%
63	7.00%	18.00%	25.00%	8.00%	14.50%	10.00%	18.00%	22.00%	10.00%
64	7.00%	10.00%	15.00%	8.00%	13.00%	8.00%	16.00%	26.00%	10.00%
65	100.00%	100.00%	100.00%	14.00%	22.00%	19.50%	29.00%	30.00%	10.00%
66				19.00%	31.00%	16.00%	32.00%	30.00%	10.00%
67				15.00%	22.00%	16.00%	28.00%	26.00%	10.00%
68				15.00%	22.00%	13.00%	24.00%	22.00%	10.00%
69				15.00%	22.00%	13.00%	24.00%	22.00%	30.00%
70				100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Retirement from Dormant Status

Dormant members are assumed to retire at Normal Retirement Age (age 58 for Tier 1, age 60 for Tier 2, age 60 for Judges, and age 55 for Police & Fire) or at the first unreduced retirement age (30 years of service, or age 50 with 25 years of service for Police & Fire).

Lump Sum Option at Retirement

Members retiring may elect to receive a full or partial lump sum at retirement. The probability that a retiring member will elect a lump sum at retirement is summarized in the table below. These rates were first adopted effective December 31, 2012.

Lump Sum Option at Retirement	
Partial Lump Sum:	5% for all years
Total Lump Sum:	4.0% for 2013, declining by 0.5% per year until reaching 0.0%
No Lump Sum:	91.0% in 2013, increasing by 0.5% per year until reaching 95.0%

Purchase of Credited Service at Retirement

The following percentages of members are assumed to purchase credit for the six-month waiting period at retirement. These rates were first adopted effective December 31, 2010.

Purchase of Credited Service at Retirement	
Money Match Retirements:	0%
Non-Money Match Retirements:	60%

Judge Member Plan Election

All judge members are assumed to elect to retire under the provisions of Plan B.

Disability Assumptions

There are two disability assumptions used in the valuation - duty disability and ordinary disability. Duty Disability rates are separated between Police & Fire and General Service, while ordinary disability is the same for all members. The rates for duty disability were first adopted effective December 31, 2012. The rates for ordinary disability were first adopted effective December 31, 2010.

	Percentage of the 1985 Disability Class 1 Rates
Duty Disability Police & Fire	20%
Duty Disability General Service	1.2%
Ordinary Disability	50% with 0.18% cap

Termination Assumptions

The termination assumptions were first adopted effective December 31, 2012.

Termination Rates

Sample termination rates are shown for each group below:

Duration from Hire Date	School District Male	School District Female	General Service Male	General Service Female	Police & Fire
0	20.00%	15.50%	19.00%	19.23%	10.00%
1	16.00%	14.05%	17.16%	16.99%	8.50%
5	8.24%	8.35%	8.36%	10.02%	4.80%
10	4.23%	4.36%	3.96%	5.18%	2.16%
15	2.78%	2.98%	2.86%	3.00%	1.30%
20	1.82%	2.23%	2.07%	2.04%	1.30%
25	1.20%	1.67%	1.49%	1.50%	1.30%
30+	1.20%	1.50%	1.40%	1.50%	1.30%

For a complete table of rates, please refer to the 2012 Experience Study for the System, which was published on September 18, 2013.

Oregon Residency Post-Retirement

For purposes of determining eligibility for SB 656/ HB 3349 benefit adjustments, 85% of retirees are assumed to remain Oregon residents after retirement.

Salary Increase Assumptions

The salary increase assumptions reflected in the actuarial valuation include:

- Merit scale increases in addition to the payroll growth increase
- Unused Sick Leave adjustments
- Vacation Pay adjustments

Merit Increases

Merit increases are based on duration of service for the following groups with sample rates shown in the following table. The school district rates were first adopted effective December 31, 2012. All other rates were first adopted effective December 31, 2010.

Duration	School District	Other General Service	Police & Fire
0	3.37%	3.61%	5.13%
1	3.02%	3.22%	4.50%
5	1.76%	1.97%	2.55%
10	0.55%	1.00%	1.20%
15	-0.31%	0.51%	0.67%
20	-0.86%	0.33%	0.59%
25	-1.00%	0.24%	0.56%
30	-1.00%	0.05%	0.19%
31+	-1.00%	0.00%	0.00%

For a complete table of rates, please refer to the 2012 Experience Study for the System, which was published on September 18, 2013.

Unused Sick Leave

Members covered by the provision allowing unused sick leave to be used to increase final average salary are assumed to receive increases in their final average salary in accordance with the table below. This adjustment is not applied to disability benefits. Local general service females were adopted effective December 31, 2001. The state general service male, state general service female and local police and fire rates were adopted effective December 31, 2010. All other rates were adopted effective December 31, 2012.

Unused Sick Leave	
Actives	
• State General Service Male	6.25%
• State General Service Female	3.75%
• School District Male	7.75%
• School District Female	5.75%
• Local General Service Male	4.75%
• Local General Service Female	3.00%
• State Police & Fire	4.75%
• Local Police & Fire	7.50%
Dormant Members	
	2.25%

Vacation Pay

Members eligible to receive a lump sum payment of unused vacation pay are assumed to receive increases in their final average salary in accordance with the table below. This adjustment is not applied to disability benefits. These rates were adopted December 31, 2012.

Vacation Pay	
Tier 1	
• State General Service	0.70%
• School District	0.25%
• Local General Service	1.00%
• State Police & Fire	0.80%
• Local Police & Fire	2.00%
Tier 2	
	0.00%

Retiree Healthcare Participation

The following percentages of eligible retiring members are assumed to elect RHIPA and RHIA coverage:

Retiree Healthcare Participation	
RHIPA	
• 8 – 9 years of service	10.0%
• 10 – 14 years of service	10.0%
• 15 – 19 years of service	15.0%
• 20 – 24 years of service	22.0%
• 25 – 29 years of service	22.0%
• 30+ years of service	30.0%
RHIA	
• Healthy Retired	45.0%
• Disabled Retired	20.0%

The RHIA disabled retired rate was first adopted December 31, 2008. All other rates were first adopted effective December 31, 2012.

OPSRP

Most of the methods and assumptions adopted for the OPSRP valuation are the same as those used for Tier 1/ Tier 2. The methods and assumptions that differ for OPSRP are summarized below. The Board adopted the following methods, procedures and assumptions for the December 31, 2012 and December 31, 2013 actuarial valuations.

Actuarial Methods and Valuation Procedures

<i>OPSRP UAL amortization</i>	The UAL as of December 31, 2007 is amortized as a level percentage of combined valuation payroll (Tier 1/ Tier 2 plus OPSRP payroll) over a closed period 16 year period. Gains and losses between subsequent odd-year valuations are amortized as a level percentage of combined valuation payroll over 16 years from the valuation in which they are first recognized.
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Economic Assumptions

<i>Administrative expenses</i>	\$5.5 million per year is added to the normal cost.
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Demographic Assumptions

Retirement Assumptions

Rates of Retirement from Active Status

Age	Police & Fire			General Service		School Districts		General Service (Including School Districts)
	< 13 yrs	13-24 yrs	25+ yrs	<15 yrs	15-29 yrs	<15 yrs	15-29 yrs	30+ yrs
50	1.00%	1.50%	5.50%					
51	1.00%	1.50%	5.50%					
52	1.00%	1.50%	5.50%					
53	1.00%	1.50%	25.00%					
54	1.00%	1.50%	16.50%					
55	2.00%	5.00%	20.00%	1.00%	2.50%	1.00%	2.50%	5.00%
56	2.00%	5.00%	20.00%	1.00%	2.50%	1.00%	2.50%	5.00%
57	2.00%	5.00%	20.00%	1.00%	2.50%	1.00%	2.50%	7.50%
58	2.00%	5.00%	20.00%	1.00%	3.00%	1.00%	3.00%	35.00%
59	2.00%	5.00%	20.00%	1.50%	3.00%	1.50%	3.00%	25.00%
60	5.00%	15.00%	20.00%	3.00%	3.75%	3.00%	3.75%	20.00%
61	2.00%	8.50%	20.00%	3.00%	5.00%	3.00%	5.00%	20.00%
62	15.00%	20.00%	35.00%	7.00%	12.00%	7.00%	12.00%	30.00%
63	7.00%	18.00%	25.00%	6.00%	10.00%	6.00%	10.00%	20.00%
64	7.00%	10.00%	15.00%	6.00%	10.00%	6.00%	10.00%	20.00%
65	100.00%	100.00%	100.00%	14.00%	40.00%	14.00%	40.00%	20.00%
66				17.25%	33.00%	17.25%	33.00%	20.00%
67				12.00%	22.00%	12.00%	22.00%	30.00%
68				10.00%	17.00%	10.00%	17.00%	20.00%
69				10.00%	17.00%	10.00%	17.00%	20.00%
70				100.00%	100.00%	100.00%	100.00%	100.00%

Rates of Retirement from Dormant Status

Dormant members are assumed to retire at their Normal Retirement Age.

Changes in Actuarial Methods and Assumptions — Tier 1/ Tier 2 and OPSRP

A summary of key changes implemented since the December 31, 2011 valuation are described briefly below. Additional detail and a comprehensive list of changes in methods and assumptions can be found in the 2012 Experience Study for the System, which was published on September 18, 2013.

Changes in Actuarial Methods and Allocation Procedures

Actuarial Cost Method

The Actuarial Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method. This change will allow PERS to use the same cost method for contribution rate calculations as will soon be required for future financial reporting under GASB Statements 67 and 68.

Tier 1/Tier 2 UAL Amortization

In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years as a level percentage of projected payroll. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

Contribution Rate Stabilization Method

The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%. The modification to the grade-in range was made in combination with the change to actuarial cost method, as discussed at the July 2013 PERS Board meeting.

Allocation of Liability for Service Segments

For purposes of allocating Tier 1/Tier 2 member’s actuarial accrued liability among multiple employers, the valuation uses a weighted average of the Money Match methodology and the Full Formula methodology used by PERS when the member retires. The weights are determined based on the prevalence of each formula among the current Tier 1/Tier 2 population. For the December 31, 2010 and December 31, 2011 valuations, the Money Match was weighted 40 percent for General Service members and 10 percent for Police & Fire members. For the December 31, 2012 and December 31, 2013 valuations, this weighting has been adjusted to 30 percent for General Service members and 5 percent for Police & Fire members, based on a projection of the proportion of liability attributable to Money Match benefits at those valuation dates.

Changes in Economic Assumptions

Investment Return and Interest Crediting

The assumed investment return and interest crediting to both regular and variable account balances was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

OPSRP Administrative Expenses

Assumed administrative expenses for the OPSRP System were reduced from \$6.6 million per year to \$5.5 million per year.

Healthcare Cost Inflation

The healthcare cost inflation for the maximum RHIPA subsidy was updated based on analysis performed by Milliman's healthcare actuaries. This analysis includes the consideration of the excise tax that will be introduced in 2018 by the Patient Protection and Affordable Care Act

Changes in Demographic Assumptions

Healthy Mortality

The healthy mortality assumption is based on the RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match recently observed system experience.

Disabled Mortality

The disabled mortality assumption base was changed from the RP2000 healthy tables to the RP2000 disabled tables. Gender-specific adjustments were applied to align the assumption with recently observed system experience.

Disability, Retirement from Active Status, and Termination

Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

Changes in Salary Increase Assumptions

Merit Increases, Unused Sick Leave, and Vacation Pay

Assumed merit increases were lowered for School District members. Unused Sick Leave and Vacation Pay rates were adjusted.

Retiree Healthcare Participation

The RHIA participation rate for healthy retirees was reduced from 48% to 45%. The RHIPA participation rate was changed from a uniform rate of 13% to a service-based table of rates.

Summary of Plan Provisions

Summary of Plan Provisions

The following section summarizes the plan provisions considered in the actuarial valuation. A more detailed description of plan provisions is available from PERS.

<i>Membership</i>	All employees of public employers participating in this System who are in qualifying positions become members of the System after completing six months of service except those who are eligible for and have elected to participate in an optional retirement plan. Different benefit provisions of the plan apply based on date of hire.	
	Tier 1	Hired prior to 1996
	Tier 2	Hired after 1995 and before August 29, 2003
	OPSRP	Hired after August 28, 2003, not a judge, and not a former Tier 1/Tier 2 member eligible to reestablish Tier 1/Tier 2 membership
	Judges	Members of the State Judiciary
<i>Member Contributions</i>	Judges	7% of salary
	All others	None
<i>Employer Contributions</i>	Set by the PERS Board based on actuarial calculations that follow Board rate-setting policies for employers.	

Summary of Chapter 238 Provisions — Tier 1/Tier 2 and Judges

<i>Normal Retirement Date</i>	Police and Fire	Age 55
	Judges	Age 65
	Tier 1 General Service	Age 58
	Tier 2 General Service	Age 60

Normal Retirement Allowance For Members who are not Judges, the greatest of the Full Formula benefit, the Money Match benefit, or the Formula Plus Annuity benefit (only available to Members who made contributions before August 21, 1981). For Members with 15 or more years of creditable service, the benefit will not be less than the minimum service retirement allowance of \$100 per month, as described in ORS 238.310.

Full Formula The percentage multiplier from the table below multiplied by final average salary and years of creditable service plus a prior service pension, if applicable.

Percentage Multiplier	Membership Classification
2.00%	Fire, Police and Legislators
1.67%	All other members

Money Match The Member’s account balance and a matching employer amount converted to an actuarially equivalent annuity.

Formula Plus Annuity The Member’s account balance converted to an actuarially equivalent cash refund annuity plus the percentage multiplier from the table below multiplied by final average salary and years of creditable service, plus a prior service pension, if applicable.

Percentage Multiplier	Membership Classification
1.35%	Fire, Police and Legislators
1.00%	All other members

Normal Retirement Allowance (continued)

Judges

Final average salary multiplied by the first percentage multiplier from the table below for up to 16 years of service plus the second percentage multiplier for any service in excess of 16 years, but not to exceed the maximum percentage of final average salary also shown below. Judges must elect Plan A or Plan B no later than age 60. A “Plan B” judge must serve as a pro tem judge for a total of 175 days postretirement.

Plan	Percentage Factor (up to 16 years)	Percentage Factor (after 16 years)	Maximum Percentage of Final Average Salary
A	2.8125%	1.67%	65%
B	3.75%	2.00%	75%

Final Average Salary

The greater of:

- Average salary earned during the three calendar years in which the member was paid the highest salary, even if one of those years is less than a full calendar year.
- Total salary earned over the last 36 months of employment divided by the actual months of service during that 36 month period.

Covered salary for this purpose includes the value of member contributions assumed and paid by employers, any payment due to an employer’s participation in the Unused Sick Leave program, and, for Tier 1 members, lump sum payment of unused vacation time.

Creditable Service

The number of years and months an active Member is paid a salary by a participating PERS employer and PERS benefits are being funded.

Prior Service Pension

Benefits payable on account of Prior Service Credit for a member’s service with a participating employer prior to the employer’s participation in PERS, as described in ORS 238.442.

SB 656/HB 3349 Adjustment

All members receive an increase to their monthly retirement benefit equal to the greater of the increase under Senate Bill 656 (SB 656) or House Bill 3349 (HB 3349). The adjustment for SB 656 only applies to members who established membership prior to July 14, 1995. Senate Bill 822, enacted in 2013, limits eligibility for these adjustments to only PERS beneficiaries who pay Oregon state income tax.

SB 656 Increase

Years of Service	General Service	Police & Fire
0-9	0.0%	0.0%
10-14	1.0	1.0
15-19	1.0	1.0
20-24	2.0	2.5
25-29	3.0	4.0
30 & Over	4.0	4.0

HB 3349 Increase

$$\left(\frac{1}{1 - \text{maximum Oregon personal income tax rate (limited to 9\%)}} - 1 \right) \times \frac{\text{Service prior to October 1, 1991}}{\text{All Service}}$$

<i>Early Retirement Eligibility</i>	Police and Fire	Age 50 or 30 years of service
	Judges	Age 60
	General Service	Age 55 or 30 years of service
<i>Early Retirement Allowance</i>	Normal retirement allowance, actuarially reduced to early retirement age. However, there is no reduction applied if a member has completed 30 years of service (25 years for police & fire members) or for judges in Plan B.	
<i>Vesting</i>	Contributions made in any part of five calendar years or attainment of age 50 (45 for police & fire) while working in a qualifying position.	
<i>Termination Benefits</i>	Non-Vested	Payment of member's account balance.
	Vested	Same as normal (or early) retirement allowance, but commencement is deferred to normal (or early) retirement date.
<i>Optional Forms of Retirement Allowance</i>	The normal form of benefit is a cash refund annuity (joint and two-thirds survivor contingent annuity for a married judge). All optional amounts are adjusted to be actuarially equivalent.	
	Options Available <ul style="list-style-type: none"> • Life annuity • Cash refund annuity • Life annuity guaranteed 15 years • Joint and 50% or 100% survivor contingent annuity, with or without pop-up feature • Partial Lump Sum: Refund of member contribution account balance plus a pension (under any optional form) of employer-paid portion of the Full Formula or Money Match annuity. • Total Lump Sum: Refund of member contribution account plus a matching employer amount. 	
<i>Preretirement Death Benefit Eligibility</i>	Judges	Six or more years of service.
	All others	Death occurring while the member is an employee of a participating employer or within 120 days of termination provided the employee does not withdraw the account balance or retire, or a result of injuries received while in the service of a participating employer.
<i>Preretirement Death Benefit</i>	Judges	The spouse shall receive a life pension equal to two-thirds of the service retirement allowance. The beneficiary of an unmarried judge shall receive the member's accumulated contributions with interest.
	All others	The member's account balance plus a matching employer amount.
<i>Additional Police & Fire Death Benefits</i>	Upon the death of a retired police officer or firefighter, the surviving spouse or dependent children under age 18 will receive a monthly benefit based on 25% of the cash refund retirement allowance due to police and fire service.	
<i>Disability Benefit Eligibility</i>	Duty	Disablement occurring as a direct result of a job-related injury or illness, regardless of length of service.
	Non-Duty	Disablement occurring after ten years of service (six years, if a judge), but prior to normal retirement eligibility.

<i>Disability Benefits</i>	<p>The normal retirement allowance calculated based on the service credit that would have been earned if the member had continued working to age 58 (age 55 for police and fire, age 65 for judge members) payable commencing immediately.</p> <p>Fire and Police Members' Alternative</p> <p>In lieu of the above, firefighters and police officers who qualify for duty disability may elect to receive a benefit of 50% of final average monthly salary at the time of disablement.</p> <p>Minimum Monthly Retirement Allowance</p> <p>Judges 45% of final average monthly salary.</p> <p>All others \$100 for a member with at least 15 years of creditable service, actuarially reduced if an optional form of benefit is chosen.</p>
<i>Waiting Time Service Purchases</i>	<p>Reduction of Benefits</p> <p>Whenever a disabled employee's disability benefit and earned income for any month exceed the monthly salary received at the time of disablement or \$400, if greater, the disability benefit will be reduced by the excess.</p> <p>For Tier Two members, the disability benefit may not exceed the member's salary at the time of disablement.</p>
<i>Police & Fire Unit Purchases</i>	<p>Members with at least 10 years of combined credited and/or prior service under PERS may elect to purchase service credit for the six-month "waiting time" period worked prior to establishing membership in the system. The waiting time purchase is interest-free and must be purchased in one payment prior to retirement.</p>
<i>Postretirement Adjustments</i>	<p>Police & fire members may purchase 60-month annuity benefits (up to \$80 per month) that must be paid out by age 65 and cannot commence prior to the earliest retirement age. The amount purchased by the member is matched by the employer. In certain situations, such as termination of employment prior to retiring, or working beyond age 65, the employer's matching purchase is forfeited.</p> <p>All monthly pension and annuity benefits except unit purchases are eligible for postretirement adjustments.</p> <p>Automatic Adjustments Pre-2014 Benefits are adjusted annually to reflect the increase or decrease in the Consumer Price Index (Portland area - all items) as published by the Bureau of Labor Statistics. The maximum adjustment to be made for any year is 2% of the previous year's benefit, except for 2013 when the adjustment is limited to 1.5%. Any CPI change in excess of the limit is accumulated for future benefit adjustments which would otherwise be less than the limit. No benefit will be decreased below its original amount.</p> <p>Automatic Adjustments Post-2013 In 2014 and future years benefits will be increased annually based on a marginal rate schedule. The increase is calculated as 1.25% on the first \$60,000 of annual benefit and 0.15% on amounts above \$60,000 of annual benefit.</p> <p>Ad Hoc Adjustments From time to time, as granted by the Legislature, retired members and beneficiaries have received increases in their monthly benefits.</p>

<i>Supplemental Payments</i>	<p>For the years 2014 through 2019, retirees are provided a supplemental payment of 0.25% of annual benefit, not to exceed \$150. In addition, retirees with an annual benefit of less than \$20,000 will receive an additional supplemental payment equal to 0.25% of the annual benefit.</p> <p>These payments are required to be funded out of the Contingency Reserve and do not compound into the retiree’s annual benefit used in determining future automatic adjustments.</p>
<i>Variable Annuity Program</i>	<p>Contributions Prior to January 1, 2004, a member could elect to have 25, 50 or 75 percent of his or her contributions invested in the variable account.</p> <hr/> <p>Benefit At retirement, a member may elect to receive a variable annuity with the funds accumulated in his or her variable account. Alternatively, a member may elect to have all or a portion of the funds in his or her variable account transferred back to the regular account and receive an annuity from the System as though no variable annuity program existed. The employer-provided benefit, however, is based on the earnings the member would have received in the regular account.</p>
<i>Interest Credit on Member Accounts</i>	<p>Tier 1 Regular Actuarially assumed rate of return until the rate guarantee reserve has been fully funded for three consecutive years and the Board elects to credit additional interest.</p> <p>Tier 2 Regular Amount determined by the Board based on actual investment earnings of the regular account.</p> <p>Variable Actual earnings in variable account.</p>
<i>Retiree Healthcare – Medicare Supplement (RHIA)</i>	<p>Retiree Eligibility All of the following must be met:</p> <ul style="list-style-type: none"> (a) Currently receiving a retirement allowance from the System, (b) Covered for eight years before retirement, (c) Enrolled in a PERS-sponsored health plan, and (d) Enrolled in both Medicare Part A and Part B. <hr/> <p>Surviving Spouse or Dependent Eligibility A surviving spouse or dependent of a deceased RHIA-eligible retiree is eligible for RHIA benefits if they are enrolled in both Medicare Part A and Part B, and <i>either</i> of the following criteria are met:</p> <ul style="list-style-type: none"> (a) Currently receiving a retirement allowance from the System, or (b) The surviving spouse or dependent was covered under the eligible retiree’s PERS-sponsored health insurance at the time of the retiree’s death and the deceased retiree retired before May 1, 1991. <hr/> <p>Benefit Amount A monthly contribution of up to \$60 per retiree is applied to PERS-sponsored Medicare supplemental insurance costs.</p>

<p><i>Retiree Healthcare – Under Age 65 (RHIPA)</i></p>	<p>Retiree Eligibility</p>	<p>Retired PERS members who were state employees at the time of retirement, are enrolled in a PERS-sponsored health plan, and are not eligible for Medicare.</p>															
	<p>Surviving Spouse or Dependent Eligibility</p>	<p>A surviving spouse or dependent of a deceased RHIPA-eligible retiree is eligible for RHIPA benefits if they are not yet eligible for Medicare, and <i>either</i> of the following criteria are met:</p> <p>(a) Currently receiving a retirement allowance from the System, or</p> <p>(b) The surviving spouse or dependent was covered under the eligible retiree’s PERS-sponsored health plan at the time of the retiree’s death and the deceased retiree retired on or after September 29, 1991.</p>															
	<p>Benefit</p>	<p>A percentage (as shown in the table below) of the maximum monthly subsidy based on years of service. The maximum monthly subsidy is calculated annually as the average difference between the health insurance premiums paid by active state employees and the premium retirees would pay if they were rated separately from active state employees.</p> <p>The maximum monthly subsidy for 2013 is \$323.18 per month.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr style="background-color: #004a7c; color: white;"> <th style="text-align: center;">Years of Service with State Employer</th> <th style="text-align: center;">Subsidized Amount</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Under 8</td> <td style="text-align: center;">0%</td> </tr> <tr> <td style="text-align: center;">8-9</td> <td style="text-align: center;">50%</td> </tr> <tr> <td style="text-align: center;">10-14</td> <td style="text-align: center;">60%</td> </tr> <tr> <td style="text-align: center;">15-19</td> <td style="text-align: center;">70%</td> </tr> <tr> <td style="text-align: center;">20-24</td> <td style="text-align: center;">80%</td> </tr> <tr> <td style="text-align: center;">25-29</td> <td style="text-align: center;">90%</td> </tr> <tr> <td style="text-align: center;">30 & Over</td> <td style="text-align: center;">100%</td> </tr> </tbody> </table>	Years of Service with State Employer	Subsidized Amount	Under 8	0%	8-9	50%	10-14	60%	15-19	70%	20-24	80%	25-29	90%	30 & Over
Years of Service with State Employer	Subsidized Amount																
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<p><i>Benefits Not Included in the Valuation</i></p>	<p>Supplemental payments made for all retirees for the years 2014 through 2019 are required to be paid out of the Contingency Reserve. Because the Contingency Reserve is excluded from the valuation assets, the liabilities for supplemental payments are also excluded from the valuation.</p>																

<i>Changes in Plan Provisions</i>	<p>Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.</p> <p>Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first \$60,000 of annual benefit and 0.15% on annual benefits above \$60,000. The effects of this legislation were reflected in this valuation.</p> <p>Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.</p>
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Summary of Chapter 238A Provisions — OPSRP

<i>Normal Retirement Date</i>	Police & Fire	Age 60 or age 53 with 25 years of retirement credit
	General Service	Age 65 or age 58 with 30 years of retirement credit
	School Districts	Age 65 or age 58 with 30 calendar years of active membership
<i>Normal Retirement Allowance</i>	A single life annuity equal to final average salary times years of retirement credit attributable to service as fire and police times 1.8% plus final average salary times all other years of retirement credit times 1.5%	
<i>Final Average Salary</i>	<p>The greater of:</p> <ul style="list-style-type: none"> • Average salary earned during the three calendar years in which the member was paid the highest salary, even if one of those years is less than a full calendar year. • Total salary earned over the last 36 months of employment divided by the actual months of service during that 36 month period. <p>Covered salary for this purpose includes base pay, plus overtime up to an average amount, plus bonuses, plus member contributions paid by the employer on a salary reduction basis. Excludes payments of unused vacation or accumulated sick leave at retirement, and member contributions “assumed and paid” by the employer.</p>	
<i>Early Retirement Eligibility</i>	Police & Fire	Age 50 and 5 years of vesting service
	General Service	Age 55 and 5 years of vesting service
<i>Early Retirement Allowance</i>	Normal retirement allowance, actuarially reduced to early retirement age.	
<i>Vesting</i>	Five years or attainment of normal retirement age.	
<i>Vested Termination Benefit</i>	Same as normal (or early) retirement allowance, but commencement is deferred to normal (or early) retirement date.	
<i>Optional Forms of Retirement Benefit</i>	<p>The normal form of benefit is a life annuity. All optional amounts are adjusted to be actuarially equivalent.</p> <p>Options Available</p> <ul style="list-style-type: none"> • Life annuity • Joint and 50% or 100% survivor contingent benefit, with or without pop-up feature • Lump sum if monthly normal retirement benefit is less than \$200 or if lump sum value is less than \$5,000. 	
<i>Preretirement Death Benefit Eligibility</i>	Death of a vested member before retirement benefits begin.	
<i>Preretirement Death Benefit</i>	If member was eligible for early retirement, the actuarial equivalent of 50% of the early retirement benefit the participant was eligible to receive at date of death. If member was not eligible for early retirement, the actuarial equivalent of 50% of the early retirement benefit the participant would have been eligible to receive if he terminated employment on his date of death and retired at the earliest possible date.	
<i>Disability Benefit Eligibility</i>	Duty	Disablement occurring as a direct result of a job-related injury or illness, regardless of length of service.
	Non-Duty	Disablement occurring after ten years of service, but prior to normal retirement eligibility.

<i>Disability Benefit Amounts</i>	Preretirement Benefit	45% of salary during last full month of employment before disability, reduced if the total benefit exceeds 75% of salary. Benefit is payable monthly until normal retirement age.
	Retirement Benefit	Same formula as Normal Retirement Benefit, except: Final average salary is adjusted to reflect cost-of-living increases from date of disability to normal retirement age, and Retirement credits continue to accrue from date of disability to normal retirement age.
<i>Postretirement Adjustments</i>	Automatic Adjustments Pre-2014	All monthly pension and annuity benefits are eligible for postretirement adjustments. Benefits are adjusted annually to reflect the increase or decrease in the Consumer Price Index (Portland area - all items) as published by the Bureau of Labor Statistics. The maximum adjustment to be made for any year is 2% of the previous year's benefit, except for 2013 when the adjustment is limited to 1.5%. Any CPI change in excess of the limit is accumulated for future benefit adjustments which would otherwise be less than the limit. No benefit will be decreased below its original amount.
	Automatic Adjustments Post-2013	In 2014 and future years benefits will be increased annually based on a marginal rate schedule. The increase is calculated as 1.25% on the first \$60,000 of annual benefit and 0.15% on amounts above \$60,000 of annual benefit.
<i>Supplemental Payments</i>		For the years 2014 through 2019, retirees are provided a supplemental payment of 0.25% of annual benefit, not to exceed \$150. In addition, retirees with an annual benefit of less than \$20,000 will receive an additional supplemental payment equal to 0.25% of the annual benefit. These payments are required to be funded out of the Contingency Reserve and do not compound into the retiree's annual benefit used in determining future automatic adjustments.
<i>Benefits Not Included in the Valuation</i>		Supplemental payments made for all retirees for the years 2014 through 2019 are required to be paid out of the Contingency Reserve. Because the Contingency Reserve is excluded from the valuation assets, the liabilities for supplemental payments are also excluded from the valuation.
<i>Changes in Plan Provisions</i>		Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation. Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first \$60,000 of annual benefit and 0.15% on annual benefits above \$60,000. The effects of this legislation were reflected in this valuation. Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

Glossary

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

Annual Pension Cost. A measure of the periodic cost of an employer’s participation in a defined benefit pension plan.

Annual Required Contributions (ARC). A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

Combined Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1, Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

Employer Contribution Rate. Consists of the normal cost rate and the UAL rates, plus adjustments for items such as side account rate offsets.

Funded Ratio. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability. The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value. Sometimes called “actuarial present value,” the current worth (on the valuation date) of an amount or series of amounts payable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar. A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 25 of the Governmental Accounting Standards Board (GASB 25). The accounting standard establishing financial reporting standards for defined benefit pension plans. The standard has been replaced by GASB Statement 67 for plan fiscal years beginning after June 15, 2013.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a governmental employer’s accounting for pensions. The standard has been replaced by GASB Statement 68 for employer fiscal years beginning after June 15, 2014.

Statement No. 43 of the Governmental Accounting Standards Board (GASB 43). The accounting standard establishing financial reporting standards for post-employment benefits other than pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a governmental employer’s accounting for post-employment benefits other than pensions.

Tier 1/Tier 2 Valuation Payroll. Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate Tier 1/Tier 2 normal cost rates.

Transition Liability. The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL). The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.